

WBS No: 1GAB0201
Activity ID: 1G00B20040

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

WBS No: 1GAB0201	Title: Group NE-1 (B-1, B-2, B-3 Ponds)
Activity ID: 1G00B20040	Description: B Ponds Conceptual Design

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0010	Conceptual Design	1.00	each	EE	240	240	6.347	4.229	0	10.576	1.790	12.366
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	1.779	1.779	0	1.779
Total for Activity 1G00B20040:						240	6.347	4.229	1.779	12.355	1.790	14.145

Line Item 0010 - Conceptual Design

BOE	Estimators Experience - Similar work with Design documents for Groundwater Plume projects. Experience Item Desc - Conceptual Design Breakdown of Cost Data: Item - Develop conceptual Design Units - 1 Unit Cost - \$2,500 subcontractor support for conceptual design from the RISS Subcontracted Ecology Group. Dollar amounts are based on similar project support requirements. \$2,500 subcontract support for GIS support. Dollar amounts are based on similar project support requirements. 2 weeks work for one Environmental Engineer and 2 Civil Engineers Unit Cost Adjustment factor - none This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
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Resources	Cost Element			Skill		Department		Curve	Quantity	Units	
	750	STRAIGHT TIME BASE		E020	CIVIL ENGINEERS		R100S	RMRS Salaried	Linear	160.00	Hours
	Factors	160	hrs								
	750	STRAIGHT TIME BASE		E050	ENVIRONMENTAL ENGINEERS		R100S	RMRS Salaried	Linear	80.00	Hours
	Factors	80	Hours								
	A5H	SUBCONTRACTED SRVS		E050	ENVIRONMENTAL ENGINEERS		K265S	ER Programs	Linear	4.228.80	Dollars
	Factors	5000	Dollars								

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	591.86	Dollars
	Factors 591.863 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	1.187.33	Dollars
	Factors 1187.33 Dollars									

Activity ID: 1G00B20080	Description: B Ponds Readiness Assessment
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Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0010	Readiness Assessment/IWCP Pond B-2	1.00	each	HC	320	320	9.459	23.343	0	32.802	2.667	35.470
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	5.103	5.103	0	5.103
Total for Activity 1G00B20080:						320	9.459	23.343	5.103	37.906	2.667	40.573

Line Item 0010 - Readiness Assessment/IWCP Pond B-2

BOE	320 Hours for task integration and oversight, documentation development, and issue resolution. 2 people full time for one month. \$27,600 for contractor to assist with finalization of the IWCP, perform pre-job evolutions, and obtain Site-specific worker training. This is the amount from the East Trenches Plume project subcontract bid. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	320.00	Hours
	Factors 320 hours								

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A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	23,342.98	Dollars
Factors 27600 \$								

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Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1.697.67	Dollars
Factors		1697.67 Dollars						
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	3.405.67	Dollars
Factors		3405.67 Dollars						

Activity ID: 1G00B20085 Description: B Ponds Site Preparation

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
010	Site Preparation	1.00	each	HC	180	180	4,976	13,617	0	18,593	1,403	19,996
020	Equipment Repair	3.00	each	EE	0	0	0	60,000	0	60,000	0	60,000
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	11,422	11,422	0	11,422
Total for Activity 1G00B20085:						180	4,976	73,617	11,422	90,015	1,403	91,418

Line Item 010 - Site Preparation

BOE

Historical Data Source - Field preparation and mobilization costs were derived from the East Trenches Plume Project.
Item Desc -
Breakdown of Historical Data:
Item - Subcontract Bid was \$16,100 to mobilize personnel to the Site.
Based on the East Trenches Plume Project, support includes a fulltime RCT, 2 fulltime project engineer support personnel, 1 fulltime project manager and a halftime health and safety support.

Units - dollars/hours
Unit Cost - \$16,100/ 40 hours RCT support, 80 hours Env. Eng, 40 hours project management and 20 hours health and safety support
Unit Cost Adjustment factor - none

Revised Unit Cost -
Basis for adjustment -

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80 h							
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 h							
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	20.00	Hours
Factors	20 h							
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLOGI	KG10H	Remediation Steelworkers	Linear	40.00	Hours
Factors	40 h							
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	13.616.74	Dollars
Factors	16100 d							

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Line Item 020 - Equipment Repair

BOE

Estimators Experience - Discussions with Site personel
Experience Item Desc - Repair of 3 onsite pump trucks
Breakdown of Cost Data:
Item - Repair of trucks will involve preventive maintenance and major component repair since these have been sitting idle and unmaintained for 5 years.
Tires, hoses, belts will have to be replaced along with pump motors.
Units - 3
Unit Cost - \$20,000
Unit Cost Adjustment factor - none
Revised Unit Cost -
Basis for adjustment -

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Starts In FY *

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	A5N FUEL & UTILITIES	C100 AUTO MECHANIC	KT10H Non Project Steelworkers	Linear	20.000.00	Dollars
Factors 20000 dollars						

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	3.741.49	Dollars
Factors 3741.5 Dollars						
	ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	7.680.91	Dollars
Factors 7680.92 Dollars						

Activity ID: 1G00B20090 Description: Pond B-2 Sediment Removal

Cost Risk 4 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0010	Pre- and Post-Remediation Sampling	1.00	each	VQ	0	0	0	55.083	0	55.083	0	55.083
0030	Excavation -- Pond B-2	1.00	each	EE	4.252	4.252	92.520	155.197	0	247.717	32.197	279.913
0050	Waste Handling -- Pond B-2	1.00	each	EE	340	340	10.050	84.576	0	94.626	3.498	98.124
070	Water control	1.00	each	EE	0	0	0	42.288	0	42.288	0	42.288
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	262.268	262.268	0	262.268
Total for Activity 1G00B20090:						4.592	102.570	337.144	262.268	701.981	35.694	737.676

Line Item 0010 - Pre- and Post-Remediation Sampling

BOE

This activity includes pre, post and in-process sampling the pond sediments as required. This task also includes the waste acceptance sampling required for disposal. Sampling will take place using hand held equipment and the Site sampling team.

Vendor Name - KH ASD
Vendor Quote - costs provided during baseline development
Quote Received by - A. Primrose
Date Received - 4/28/00
Item being quoted - sample costs
230 sample bottles at \$7 each = \$1,610
Shipping at \$42 for 10 bottles. There will be 23 groups of 10 bottles times \$42 = \$966
60 rad screens at \$32 each = \$1,920
60 isotopics at \$590 each = \$35,400
20 VOCs at \$280 each = \$5,600
20 metals at \$345 each = \$6,950
10 PCBs at \$150 each = \$1,500
Data validation will be done for 3 sets of 20 samples each
1 VOC Data validation cost for > 11 samples at \$246 each = \$246
3 rad data validation costs for >11 samples at \$312 each = \$936

Sampling - Rad (base cost per day) \$1,000. 10 days of sampling = \$10,000

Total Cost \$65,128

Availability - yes

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	A5H SUBCONTRACTED SRVS	0000 NONE	K267S Analytical Laboratory Services	Linear	55.082.66	Dollars
Factors 65128 \$						

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Line Item 0030 - Excavation -- Pond B-2

BOE

The existing pump trucks will be used to excavate the pond sediment after the water is drained from the pond. Assume that 1.5 roll-offs per day of sediment can be removed per day and stockpiled per day. 43 roll-offs are required for this pond, for approximately 30 days effort with 4 days weather delay. Each day is a 10 hour day. Assume that the sediment to be removed is within 2 feet of the surface and unconsolidated. No additional equipment will be required to break up the sediment for removal. Assume 6 KH laborers will be required each day to guide the hoses and perform other tasks. 3 KH teamsters will be required to operate trucks and pumpers. One subcontract Project Manager and one field supervisor will be required

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KH Remediation Laborers 34 days * 10 hours/day * 6 people = 2,040 hours
KH Remediation Operators 34 days * 10 hours/day * 3 people = 1,020 hours
KH RCT support 34 days * 10 hours/day * 2 people = 680 hours

Subcontract Project Manager = \$75/hr*34*10 = \$25,500
Subcontract Field Supervisor = \$60/hr*34*10 = \$20,400
Subcontract Health & Safety = \$60/hr*34*10 = \$20,400
Subcontract Pumper truck operators = 3 at \$60/hr*34*10 = \$61,200
Materials and fuel = \$50,000
Truck leasing (3 at \$2,000 each) = \$6,000
Total A5h = \$183,500

KH/RMRS oversight includes a full time engineer, 1/4 time H&S oversight, 1/4 time Rad Engineering support.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	340.00	Hours
Factors	340	hrs						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	86.00	Hours
Factors	86	Hours						
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	86.00	Hours
Factors	86	hrs						
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KG10H	Remediation Steelworkers	Linear	680.00	Hours
Factors	680	hrs						
750	STRAIGHT TIME BASE	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	3,060.00	Hours
Factors	3060	Hours						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	155,197.00	Dollars
Factors	183500	\$						

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Line Item 0050 - Waste Handling -- Pond B-2

BOE

34 days*10 hours/day = 340 hours for a full-time waste generator on the project to perform the following tasks.

- 1) Preparing Waste Acceptance Forms
- 2) Performing Waste Acceptance Sampling
- 3) Inspection of stored wastes until shipment

It is assumed that the sediments will need to be dewatered prior to dispositioning. \$100,000 as an A5H cost has been included in this estimate as a placeholder until the dewatering methodology has been indentified and costed. This may be a simple centrifuge, or press.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	340.00	Hours
Factors	340	hours						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	84,576.00	Dollars
Factors	100000	d						

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Line Item 070 - Water control

BOE

A small dam or containment is needed upgradient of the B-2 Pond to divert incoming water during the construction period. A sump pump will be required along with flexible piping to bypass the B-2 Pond and direct water to B-3 Pond. Estimated cost is \$50,000 for the engineering design, installation and removal of this structure.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	42,288.00	Dollars
Factors	50000	d						

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Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	188.619.70
Factors		188620 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	73.648.07
Factors		73648.1 Dollars					

Activity ID: 1G00B20100 Description: Pond B-2 Site Restoration

Cost Risk 4 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0040	Site Restoration -- Pond B-2	1.00	each	HC	170	170	4.862	13.532	0	18.394	1.692	20.086
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	11.081	11.081	0	11.081
Total for Activity 1G00B20100:						170	4.862	13.532	11.081	29.475	1.692	31.167

Line Item 0040 - Site Restoration -- Pond B-2

BOE

Site Restoration involves Regrading and Revegetation Based on similar projects, this effort will require 80 hours Environmental Scientists, 60 hours civil engineers, 30 hours of ecologists (other professionals), \$16,000 in subcontracted services.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E020	CIVIL ENGINEERS	R100S	RMRS Salaried	Linear	60.00
Factors		60 hrs					
750	STRAIGHT TIME BASE	P170	OTHER ADMINISTRATIVE & PROFE	R100S	RMRS Salaried	Linear	30.00
Factors		30 hrs					
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	80.00
Factors		80 hrs					
ASH	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	13.532.16
Factors		16000 \$					

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Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	7.969.19
Factors		7969.19 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	3.111.63
Factors		3111.63 Dollars					

Activity ID: 1G00B30020 Description: B Ponds Decision Document Preparation

Cost Risk 2 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
010	PAM	1.00	each	EE	740	740	21.568	0	0	21.568	6.082	27.650
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	3.978	3.978	0	3.978
Total for Activity 1G00B30020:						740	21.568	0	3.978	25.546	6.082	31.628

Line Item 010 - PAM

BOE

Estimator's Experience based generally on historical data for Ryan's Pit

Item Desc:
Preparation of PAM in support of source removal of previously characterized UBC.

Breakdown of Cost Data:

Item: Preparation of PAM for Ryan's Pit source removal action modified to include GIS support.

Units: hours

Unit Cost: 40 hours GIS support, 72 hours project manager technical support, 628 hours for technical staff to write document.

Unit Cost Adjustment Factor: None

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Revised Unit Hours: None						
Basis for adjustment. None						

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	628.00	Hours
	Factors 628 hrs						
	750	STRAIGHT TIME BASE	M010 FOREMEN / TEAM LEADS / GROUP	K265S ER Programs	Linear	72.00	Hours
	Factors 72 hrs						
	750	STRAIGHT TIME BASE	P060 COMPUTER SYSTEMS ANALYSTS	R100S RMRS Salaried	Linear	40.00	Hours
	Factors 40 hrs						

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	1.323.38	Dollars
	Factors 1323.38 Dollars						
	ESC	ESCALATION	0000 NONE	ZDEPT No Department	Linear	2.654.82	Dollars
	Factors 2654.82 Dollars						

Activity ID: 1G00B30090 Description: Pond B-3 Sediment Removal

Cost Risk 2 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0010	Pre- and Post-Remediation Sampling	1.00	each	VQ	0	0	0	55.083	0	55.083	0	55.083
0030	Excavation -- Pond B-3	1.00	each	EE	3.250	3.250	70.699	129.824	0	200.523	24.603	225.127
0050	Waste Handling -- Pond B-3	1.00	each	EE	260	260	7.686	84.576	0	92.262	2.675	94.936
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	202.686	202.686	0	202.686
Total for Activity 1G00B30090:						3.510	78.385	269.483	202.686	550.553	27.278	577.831

Line Item 0010 - Pre- and Post-Remediation Sampling

BOE

This activity includes pre, post and in-process sampling the pond sediments as required. This task also includes the waste acceptance sampling required for disposal. Sampling will take place using hand held equipment and the Site sampling team.

Vendor Name - KH ASD
Vendor Quote - costs provided during baseline development
Quote Received by - A. Primrose
Date Received - 4/28/00
Item being quoted - sample costs
230 sample bottles at \$7 each = \$1,610
Shipping at \$42 for 10 bottles. There will be 23 groups of 10 bottles times \$42 = \$966
60 rad screens at \$32 each = \$1,920
60 isotopics at \$590 each = \$35,400
20 VOCs at \$280 each = \$5,600
20 metals at \$345 each = \$6,950
10 PCBs at \$150 each = \$1,500
Data validation will be done for 3 sets of 20 samples each
1 VOC Data validation cost for > 11 samples at \$246 each = \$246
3 rad data validation costs for >11 samples at \$312 each = \$936

Sampling - Rad (base cost per day) \$1,000. 10 days of sampling = \$10,000

Total Cost \$65,128

Availability - yes

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
	A5H	SUBCONTRACTED SRVS	0000 NONE	K267S Analytical Laboratory Services	Linear	55.082.66	Dollars
	Factors 65128 \$						

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Line Item 0030 - Excavation -- Pond B-3

BOE	<p>The existing pump trucks will be used to excavate the pond sediment after the water is drained from the pond. Assume that 1.5 roll-offs per day of sediment can be removed per day and stockpiled per day. 33 roll-offs are required for this pond, for approximately 26 days total. Each day is a 10 hour day. Assume that the sediment to be removed is within 2 feet of the surface and unconsolidated. No additional equipment will be required to break up the sediment for removal. Assume 6 KH laborers will be required each day to guide the hoses and perform other tasks. 3 KH teamsters will be required to operate trucks and pumps. One subcontract Project Manager and one field supervisor will be required</p> <p>KH Remediation Laborers 26 days * 10 hours/day * 6 people = 1,560 hours KH Remediation Operators 26 days * 10 hours/day * 3 people = 780 hours KH RCT support 26 days * 10 hours/day * 2 people = 520 hours</p> <p>Subcontract Project Manager = \$75/hr*26*10 = \$19,500 Subcontract Field Supervisor = \$60/hr*26*10 = \$15,600 Subcontract Health & Safety = \$60/hr*26*10 = \$15,600 Subcontract Pumper truck operators = 3 at \$60/hr*26*10 = \$46,800 Materials and fuel = \$50,000 Truck leasing (3 at \$2,000 each) = \$6,000 Total A5h = \$153,500</p> <p>KH/RMRS oversight includes a full time engineer, 1/4 time H&S oversight, 1/4 time Rad Engineering support.</p> <p>This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.</p>				
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Resources		Cost Element	Skill	Department	Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	260.00	Hours
Factors	260	hrs					
	750	STRAIGHT TIME BASE	P080 HEALTH PHYSICISTS	R100S RMRS Salaried	Linear	65.00	Hours
Factors	65	Hours					
	750	STRAIGHT TIME BASE	P090 INDUSTRIAL HYGIENISTS	R100S RMRS Salaried	Linear	65.00	Hours
Factors	65	hrs					
	750	STRAIGHT TIME BASE	T050 RADIATION CONTROL TECHNOLOGI	KG10H Remediation Steelworkers	Linear	520.00	Hours
Factors	520	hrs					
	750	STRAIGHT TIME BASE	T060 D&D HAZ REDUC TECH / RISK RED	KG10H Remediation Steelworkers	Linear	2,340.00	Hours
Factors	2340	Hours					
	A5H	SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	129,824.20	Dollars
Factors	153500	\$					

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Line Item 0050 - Waste Handling -- Pond B-3

BOE	<p>26 days*10 hours/day = 260 hours for a full-time waste generator on the project to perform the following tasks.</p> <p>1) Preparing Waste Acceptance Forms 2) Performing Waste Acceptance Sampling 3) Inspection of stored wastes until shipment</p> <p>It is assumed that the sediments will need to be dewatered prior to dispositioning. \$100,000 as an A5H cost has been included in this estimate as a placeholder until the dewatering methodology has been indentified and costed. This may be a simple centrifuge, or press.</p> <p>This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.</p>				
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Resources		Cost Element	Skill	Department	Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	260.00	Hours
Factors	260	hours					
	A5H	SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	84,576.00	Dollars
Factors	100000	d					

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources	<i>Cost Element</i>	<i>Skill</i>	<i>Department</i>	<i>Curve</i>	<i>Quantity</i>	<i>Units</i>
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WBS No: 1GAB0201
Activity ID: 1G00B30090

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	144,569.70	Dollars
Factors 144570 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	58,115.85	Dollars
Factors 58115.9 Dollars								

Activity ID: 1G00B30120 Description: Pond B-3 Site Restoration

Cost Risk 4 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0010	Site Restoration -- Pond B-3	1.00	each	HC	170	170	4,862	13,532	0	18,394	1,692	20,086
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	11.081	11,081	0	11,081
Total for Activity 1G00B30120:						170	4,862	13,532	11.081	29,475	1,692	31,167

Line Item 0010 - Site Restoration -- Pond B-3

BOE
Site Restoration involves Regrading and Revegetation
Based on similar projects, this effort will require 80 hours Environmental Scientists, 60 hours civil engineers, 30 hours of ecologists (other professionals), \$16,000 in subcontracted services.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
750 STRAIGHT TIME BASE	E020 CIVIL ENGINEERS	R100S RMRS Salaried	Linear	60.00	Hours
Factors 60 hrs					
750 STRAIGHT TIME BASE	P170 OTHER ADMINISTRATIVE & PROFF	R100S RMRS Salaried	Linear	30.00	Hours
Factors 30 hrs					
750 STRAIGHT TIME BASE	S020 ENVIRONMENTAL SCIENTISTS	R100S RMRS Salaried	Linear	80.00	Hours
Factors 80 hrs					
A5H SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	13,532.16	Dollars
Factors 16000 \$					

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Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	7,969.19	Dollars
Factors 7969.19 Dollars					
ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	3,111.63	Dollars
Factors 3111.63 Dollars					

Activity ID: 1G00B30130 Description: Prepare Closeout Report - IHSS Group NE-1

Cost Risk 2 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
01000	develop closeout report	1.00	each	EE	648	648	18,702	2,842	0	21,544	6,508	28,052
02000	develop NFA documentation	1.00	each	EE	138	138	4,099	0	0	4,099	1,426	5,525
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	18.141	18,141	0	18,141
Total for Activity 1G00B30130:						786	22,801	2,842	18.141	43,783	7,935	51,718

Line Item 01000 - develop closeout report

BOE
Estimator's Experience on similar projects

Item Desc: Perform Data Analysis including GIS representation of data, Characterization Report, and associated project management.

Breakdown of Cost Data:
Item: Develop Characterization Report
Units: 648 hours

2 Environmental Engineers full time for 2 weeks to develop draft 160 hrs
1 Project Manager full time for 4 weeks 160 hrs
1 Secretary 1/2 time for 4 weeks to format and copy 80 hrs
1 QA person 8 hours for review 8 hrs
2 GIS individuals 2 weeks to create/revise maps 160 hrs

WBS No: 1GAB0201
Activity ID: 1G00B30130

Rockv Flats Closure Project
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WBS Filter 1GAB
Activity Filter * Starts In FY *

2 Environmental Engineer full time 1 week for comment response 80 hrs
1 project planner 1/2 time for 4 weeks. 80 hrs

Unit Cost Adjustment Factor: none
Revised Unit Hours:

Basis for adjustment. None

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	240.00	Hours
Factors	240 hrs							
750	STRAIGHT TIME BASE	E110	QUALITY CONTROL ENGINEERS	R100S	RMRS Salaried	Linear	8.00	Hours
Factors	8 hrs							
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80 hrs							
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160 hrs							
750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160 hrs							
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	2,841.75	Dollars
Factors	80 hrs	42	estimated \$/hr					

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Line Item 02000 - develop NFA documentation

BOE

Estimator's Experience:
This estimate was constructed based on actual hours required to complete previous NFA Reports (obtained from actual author) and professional judgement of level of effort required for remaining reports.

Item Desc:
Perform Data Analysis including GIS representation of data, Characterization Report, and associated project management.

Breakdown of Cost Data:
Item: Develop Documentation
Units: Hours
Unit Cost: 138

Environmental Engineer	45 hrs	Evaluate & assemble existing data. Draft Report.
SWD Technician	10 hrs	Identify & pull existing data from database.
GIS Technician	15 hrs	Develop maps for Report. Print multiple copies.
Technical Editor	15 hrs	Complete initial and revised tech edits of Report.
Technical Reviews		
QA	4 hrs	Review and comment per area of expertise.
Peer (2)	8 hrs	Review and comment per area of expertise.
Compliance	4 hrs	Review and comment per area of expertise.
Environmental	4 hrs	Review and comment per area of expertise.
Management (2)	8 hrs	Review and comment per area of expertise.
Legal	4 hrs	Review and comment per area of expertise.
Environmental Engineer	15 hrs	Disposition comments and finalize document.
Administrative Support	6 hrs	Copy & assemble final documents, submit to records.

Unit Cost Adjustment Factor: none
Revised Unit Hours: 138
Basis for adjustment. N/A

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	60.00	Hours
Factors	60 hrs							
750	STRAIGHT TIME BASE	E110	QUALITY CONTROL ENGINEERS	R100S	RMRS Salaried	Linear	4.00	Hours
Factors	4 hrs							
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	6.00	Hours
Factors	6 hrs							

WBS No: 1GAB0201
Activity ID: 1G00B30130

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750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	K265S	ER Programs	Linear	4.00	Hours
Factors	4	hrs						
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K109S	Env Sys. Stewardship & Compliance	Linear	4.00	Hours
Factors	4	hrs						
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	4.00	Hours
Factors	4	hrs						
750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	K215S	Information Resource Mgt	Linear	25.00	Hours
Factors	25	hrs						
750	STRAIGHT TIME BASE	P160	TECHNICAL WRITERS AND EDITOR	R100S	RMRS Salaried	Linear	15.00	Hours
Factors	15	hrs						
750	STRAIGHT TIME BASE	P170	OTHER ADMINISTRATIVE & PROFE	K101S	General Counsel	Linear	4.00	Hours
Factors	4	hrs						
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	K253S	Remediation, Industrial & Site Serv	Linear	4.00	Hours
Factors	4	hrs						
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	8.00	Hours
Factors	8	hrs						

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	12.939.54	Dollars
Factors	12939.5	Dollars			
ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	5.201.59	Dollars
Factors	5201.59	Dollars			

Activity ID: 1GCM920515 Description: B Ponds Biological Assessment

Cost Risk 2 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0010a	Biological Assessment	1.00	each	HC	80	80	2,365	67,661	0	70,026	667	70,692
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	10.171	10.171	0	10.171
Total for Activity 1GCM920515:						80	2,365	67,661	10.171	80.197	667	80,864

Line Item 0010a - Biological Assessment

BOE

This task involves performing a Biological Assessment for the Pond B-1, B-2, and B-3 Pond Sediment Removal Project. This Biological Assessment must be reviewed by the regulators, which will issue a Biological Opinion. The area and type of wetland and/or habitat must be characterized before the regulators can determine if the proposed mitigation will be sufficient to offset the loss. In accordance with Section 7 of the Endangered Species Act and the Interagency Cooperation Regulations (50 CFR 402), the Biological Opinion is required for the project. The Biological Assessment and subsequent Biological Opinion are based upon information regarding cumulative effects, conditions forming the environmental baseline, each species ecological status, and the importance of habitats affected by the project to the survival and recovery of affected species.

It was assumed that one Biological Assessment would be developed, which would encompass sediment removal activities planned for Ponds B-1, B-2, and B-3.

80 Hours for task integration and oversight, issue resolution, and regulatory agency interface.

\$75,000 for a contractor to develop a Biological Assessment which addresses the cumulative effects, conditions forming the environmental baseline, evaluating potential ecological and sensitive habitat impacts.

\$5,000 for an Ecological contractor to assist in developing the Biological Assessment and to coordinate with the U.S. Fish and Wildlife Service on the species and habitat of concern.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	80.00	Hours
Factors	80	hours			
A5H SUBCONTRACTED SRVS	0000 NONE	K109S Env Sys. Stewardship & Compliance	Linear	4.228.80	Dollars
Factors	5000	\$			

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WBS No: 1GAB0201
Activity ID: 1GCM920515

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A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	63,432.00	Dollars
Factors 75000 \$								

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Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	3,383.52	Dollars

Factors 3383.52 Dollars

ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	6,787.63	Dollars
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Factors 6787.63 Dollars

Activity ID: 1GCM920525 Description: B Ponds Procurement

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0010	Procurement/Contractor Selection	1.00	each	HC	480	480	13,250	0	0	13,250	3,736	16,986
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	2,444	2,444	0	2,444
Total for Activity 1GCM920525:						480	13,250	0	2,444	15,694	3,736	19,430

Line Item 0010 - Procurement/Contractor Selection

BOE

This activity involves the project bid phase to subcontract sediment removal from the Ponds B-1, B-2, and B-3. This activity includes issuing the Bidding Requirements, Contract Forms, Conditions of the Contract, and Specifications for the sediment removal project.

160 Hours for statement of work preparation, review of bids, conducting Site walkdown for prospective bidders, and integrating Health and Safety requirements into the Bid Package.

It was assumed that only one Procurement/Contractor Selection activity would be required for the Pond B-1, B-2, and B-3 Sediment Removal Project.

160 Hours for Engineering construction requirements interpretation, bid technical review, identification of construction specification requirements, providing numerous copies of Contract Drawings, and review/approval of Design drawings.

160 hours for Procurement to issue bid notices, provide construction requirements interpretation, received bid cost review, providing numerous copies of Contract Bid Packages, conducting prospective bidders conference, review and approval of Contract Award, and performance of contract addenda and revisions.

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
750 STRAIGHT TIME BASE	E020 CIVIL ENGINEERS	R100S RMRS Salaried	Linear	160.00	Hours

Factors 160 hrs

750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	160.00	Hours
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Factors 160 hrs

750 STRAIGHT TIME BASE	P030 BUYERS PROCUREMENT AND CON	K216S Subcontracts Management	Linear	160.00	Hours
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Factors 160 hrs

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	812.99	Dollars

Factors 812.991 Dollars

ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	1,630.93	Dollars
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Factors 1630.93 Dollars

Activity ID: 1GCM920535 Description: B Ponds Field Document Preparation

Cost Risk 2 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0010	Sampling and Analysis Plan	1.00	each	EE	340	340	9,830	0	0	9,830	2,772	12,602
0025	Health and Safety Plan	1.00	each	HC	50	50	1,684	6,089	0	7,773	475	8,248
0050	Field Implementation Plan	1.00	each	HC	60	60	2,251	14,716	0	16,968	635	17,603
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	5,532	5,532	0	5,532
Total for Activity 1GCM920535:						450	13,765	20,806	5,532	40,103	3,882	43,985

WBS No: 1GAB0201
Activity ID: 1GCM920535

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
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Activity Filter *

Starts In FY *

Line Item 0010 - Sampling and Analysis Plan

BOE	<p>The Sampling and Analysis Plan directs the collection of field data. The objective of the Sampling and Analysis Plan is to delineate the specific data needs, sampling and analysis requirements, data handling procedures, and associated Quality Assurance/Quality Control requirements for the sediment removal at the ponds. This task is expected to be completed by Site Personnel.</p> <p>Estimators Experience - 10 years experience estimating similar tasks Experience Item Desc - preparation of the sampling and analysis plan Breakdown of Cost Data: Item: Prepare SAP address DOE and regulatory agency comments. The estimate is based on other limited sampling projects such as that for IHSS 118.1.</p> <p>Units: hours Unit Cost: 340 Unit Cost Adjustment Factor: none Revised Unit Hours: 340</p> <p>E050 Environmental Engineer 2.5 Weeks for document development M010 Project Management 10% oversight of project P090 Industrial Hygienist 1 week for HASP development P080 Health Physicist 1 week for ALARA review and RWP G010 Administrative 40 hours Secretarial support for document prep and distribution E110 Quality Control Engineers 40 hours for document review and comment resolution P070 Project Controls 40 hours planning and scheduling support based on similar projects.</p> <p>Total = 340 hours</p> <p>Basis for adjustment: None</p>
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Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	100.00	Hours
Factors	100 hrs							
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 hrs							
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 hrs							
750	STRAIGHT TIME BASE	P070	COST ESTIMATORS PLANNERS AN	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 hrs							
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 hrs							
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 hrs							
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 hrs							

Line Item 0025 - Health and Safety Plan

BOE	<p>The subcontractor working on the pond sediment removal project must develop a Health and Safety Plan acceptable to the Site. This activity addresses the Health and Safety Plan for sediment removal at Ponds B-1, B-2, and B-3. It was assumed that only one HASP would be sufficient to perform similar work in these ponds. This task will be performed by subcontract personnel with Site input.</p> <p>Historical Data Source - Successful subcontract bid for the East Trenches Plume project. Breakdown of Historical Data: Item - health and safety plan Units - 1 Unit Cost - \$7,200 (from successful bidder) Unit Cost Adjustment factor - none Revised Unit Cost - Basis for adjustment -</p> <p>40 hours IH support and 10 hours rad engineer support are required based on previous experience with the East Trenches Plume Project.</p> <p>This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.</p>
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WBS No: 1GAB0201
Activity ID: 1GCM920535

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Resources	Cost Element			Skill		Department		Curve	Quantity	Units	
	750	STRAIGHT TIME BASE		P080	HEALTH PHYSICISTS		R100S	RMRS Salaried	Linear	10.00	Hours
	Factors		10	hrs							
	750	STRAIGHT TIME BASE		P090	INDUSTRIAL HYGIENISTS		R100S	RMRS Salaried	Linear	40.00	Hours
	Factors		40	hrs							
	A5H	SUBCONTRACTED SRVS		0000	NONE		K265S	ER Programs	Linear	6.089.47	Dollars
	Factors		7200	d							

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Line Item 0050 - Field Implementation Plan

BOE	<p>The Field Implementation Plan will delineate the placement of any soil stockpile, the rip-rap stockpile, and will identify the disposition process for any accumulated water. This activity will develop the Plan for removal of sediment in Ponds B-1, B-2, and B-3.</p> <p>Historical Data Source - Successful Bid for East Trenches Plume Project Item Desc - Field Implementation Plan Breakdown of Historical Data: Item - FIP Units - 1 Unit Cost - \$17,400 based on the subcontract bid. Unit Cost Adjustment factor - none Revised Unit Cost - Basis for adjustment -</p> <p>40 hours environmental engineer and 20 hours of project management support for document reviews, issue resolution will be required based on the East Trenches Plume project.</p> <p>This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.</p>								
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
	Factors	40	h						
	750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	20.00	Hours
	Factors	20	hrs						
	A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	14.716.22	Dollars
	Factors	17400	d						

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Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	1.840.43	Dollars
	Factors		1840.43 Dollars							
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	3.692.06	Dollars
	Factors		3692.06 Dollars							

Activity ID: 1GCM920545 Description: Pond B-1 Sediment Removal

Cost Risk 2 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0010	Pre- and Post-Remediation Sampling	1.00	each	VQ	0	0	0	55.083	0	55.083	0	55.083
0030	Excavation -- Pond B-1	1.00	each	EE	4.252	4.252	92.520	155.197	0	247.717	31.753	279.469
0050	Waste Handling -- Pond B-1	1.00	each	EE	340	340	10.050	84.576	0	94.626	3.449	98.076
070	Water control	1.00	each	EE	0	0	0	42.288	0	42.288	0	42.288
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	226.432	226.432	0	226.432
Total for Activity 1GCM920545:						4.592	102.570	337.144	226.432	666.146	35.202	701.348

Line Item 0010 - Pre- and Post-Remediation Sampling

BOE	<p>This activity includes pre, post and in-process sampling the pond sediments as required. This task also includes the waste acceptance sampling required for disposal. Sampling will take place using hand held equipment and the Site sampling team.</p> <p>Vendor Name - KH ASD</p>								
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WBS No: 1GAB0201
Activity ID: 1GCM920545

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Vendor Quote - costs provided during baseline development
Quote Received by - A. Primrose
Date Received - 4/28/00
Item being quoted - sample costs
230 sample bottles at \$7 each = \$1,610
Shipping at \$42 for 10 bottles. There will be 23 groups of 10 bottles times \$42 = \$966
60 rad screens at \$32 each = \$1,920
60 isotopics at \$590 each = \$35,400
20 VOCs at \$280 each = \$5,600
20 metals at \$345 each = \$6,950
10 PCBs at \$150 each = \$1,500
Data validation will be done for 3 sets of 20 samples each
1 VOC Data validation cost for > 11 samples at \$246 each = \$246
3 rad data validation costs for >11 samples at \$312 each = \$936

Sampling - Rad (base cost per day) \$1,000. 10 days of sampling = \$10,000

Total Cost \$65,128

Availability - yes

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K267S	Analvtical Laboratory Services	Linear	55.082.66Dollars
Factors	65128	\$					

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Line Item 0030 - Excavation -- Pond B-1

BOE	The existing pump trucks will be used to excavate the pond sediment after the water is drained from the pond. Assume that 1.5 roll-offs per day of sediment can be removed per day and stockpiled per day. 43 roll-offs are required for this pond, for approximately 30 days effort with 4 days weather delay. Each day is a 10 hour day. Assume that the sediment to be removed is within 2 feet of the surface and unconsolidated. No additional equipment will be required to break up the sediment for removal. Assume 6 KH laborers will be required each day to guide the hoses and perform other tasks. 3 KH teamsters will be required to operate trucks and pumps. One subcontract Project Manager and one field supervisor will be required						
	KH Remediation Laborers 34 days * 10 hours/day * 6 people = 2,040 hours KH Remediation Operators 34 days * 10 hours/day * 3 people = 1,020 hours KH RCT support 34 days * 10 hours/day * 2 people = 680 hours						
	Subcontract Project Manager = \$75/hr*34*10 = \$25,500 Subcontract Field Supervisor = \$60/hr*34*10 = \$20,400 Subcontract Health & Safety = \$60/hr*34*10 = \$20,400 Subcontract Pumper truck operators = 3 at \$60/hr*34*10 = \$61,200 Materials and fuel = \$50,000 Truck leasing (3 at \$2,000 each) = \$6,000 Total A5h = \$183,500						
	KH/RMRS oversight includes a full time engineer, 1/4 time H&S oversight, 1/4 time Rad Engineering support.						
	This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.						

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	340.00Hours
Factors	340	hrs					
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	86.00Hours
Factors	86	Hours					
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	86.00Hours
Factors	86	hrs					
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KG10H	Remediation Steelworkers	Linear	680.00Hours
Factors	680	hrs					
750	STRAIGHT TIME BASE	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	3.060.00Hours
Factors	3060	Hours					

WBS No: 1GAB0201
Activity ID: 1GCM920545

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	155,197.00	Dollars
Factors	183500 \$							

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Line Item 0050 - Waste Handling -- Pond B-1

BOE	34 days*10 hours/day = 340 hours for a full-time waste generator on the project to perform the following tasks. 1) Preparing Waste Acceptance Forms 2) Performing Waste Acceptance Sampling 3) Inspection of stored wastes until shipment It is assumed that the sediments will need to be dewatered prior to dispositioning. \$100,000 as an A5H cost has been included in this estimate as a place-holder until the dewatering methodology has been indentified and costed. This may be a simple centrifuge, or press. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.											
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	340.00	Hours
	Factors 340 hours								
	A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	84,576.00	Dollars
	Factors 100000 d								

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Line Item 070 - Water control

BOE	A small dam or containment is needed upgradient of the B-1 Pond to divert incoming water during the construction period. A sump pump will be required along with flexible piping to bypass the B-1 Pond and direct water to B-2 Pond. Estimated cost is \$50,000 for the engineering design, installation and removal of this structure. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.											
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	42,288.00	Dollars
	Factors 50000 d								

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Line Item SYS - Contingency And Escalation

BOE										
Resources	<i>Cost Element</i>			<i>Skill</i>		<i>Department</i>		<i>Curve</i>	<i>Quantity</i>	<i>Units</i>
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	154,868.10	Dollars
	<i>Factors</i> 154868 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	71,564.34	Dollars
	<i>Factors</i> 71564.3 Dollars									

Activity ID: 1GCM920560 Description: Pond B-1 Site Restoration

Cost Risk 4 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0040	Site Restoration -- Pond B-1	1.00	each	HC	170	170	4,862	13,532	0	18,394	1,692	20,086
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	11,081	11,081	0	11,081
Total for Activity 1GCM920560:						170	4,862	13,532	11,081	29,475	1,692	31,167

Line Item 0040 - Site Restoration -- Pond B-1

BOE	Site Restoration involves Regrading and Revegetation Based on similar projects, this effort will require 80 hours Environmental Scientists, 60 hours civil engineers, 30 hours of ecologists (other professionals), \$16,000 in subcontracted services. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.											
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Resources	Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E020	CIVIL ENGINEERS	Linear	60.00	Hours
Factors	60 hrs					
750	STRAIGHT TIME BASE	P170	OTHER ADMINISTRATIVE & PROFE	Linear	30.00	Hours
Factors	30 hrs					

WBS No: 1GAB0201
Activity ID: 1GCM920560

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	hrs						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	13,532.16	Dollars
Factors	16000	\$						

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Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	7.969.19	Dollars
	Factors 7969.19 Dollars								
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	3.111.63	Dollars
	Factors 3111.63 Dollars								

Activity ID: 1GCM920570 Description: B Ponds Project Management

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0010	Project Management	1.00	each	HC	2,740	2,740	70,987	0	0	70,987	22,208	93,195
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	30,176	30,176	0	30,176
Total for Activity 1GCM920570:						2,740	70,987	0	30,176	101,163	22,208	123,371

Line Item 0010 - Project Management

BOE

The following basis of estimate provides a description of hours/dollars necessary to perform budget preparation and management for the entire WADlet. Hours and dollars budgeted for this ongoing activity item are based on actual values needed to perform same activities during FY98 and FY99.

A full time project manager is required for this project. 1820 hours per year.

Based on previous projects, a 1/4 time budget analyst/scheduler is required for budget/schedule tracking = 460 hours

Based on previous projects, a 1/4 time secretary is required for project support = 460 hours

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	460.00	Hours
Factors	460	hrs							
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried		Linear	1,820.00	Hours
Factors	1820	hrs							
750	STRAIGHT TIME BASE	P070	COST ESTIMATORS PLANNERS AN	R100S	RMRS Salaried		Linear	460.00	Hours
Factors	460	hrs							

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	18,592.83	Dollars
	Factors 18592.8 Dollars								
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	11,582.82	Dollars
	Factors 11582.8 Dollars								

WBS No: 1GAB0202 Title: Group NE-2 (Trench 7)

Activity ID: 1GNE200105 Description: T-7 Project Scoping - IHSS Group NE-2

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Scoping	1.00	each	EE	80	80	2,365	9,878	0	12,243	835	13,078
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	1,975	1,975	0	1,975
Total for Activity 1GNE200105:						80	2,365	9,878	1,975	14,218	835	15,053

Line Item 10 - Scoping

BOE

Estimators Experience - Estimator has entertained numerous SAP scoping questions and issue delivered by regulators

Experience Item Desc - 903 Pad SAP development

Breakdown of Cost Data:

Item - lot

WBS No: 1GAB0202
Activity ID: 1GNE200105

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter * Starts In FY *

Units - site hours, subcontractor dollars
Unit Cost - 80 site hours, \$11,680 Subcontractor dollars
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

Assumes 1 site FTE and 1 Subcontractor FTE (engineer level at \$73/hour) to complete scoping activity

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00 Hours
Factors	80	Hours					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	9.878.48 Dollars
Factors	11680	Dollars	Subcontractor				

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Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1.363.67 Dollars
Factors	1363.67	Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	611.16 Dollars
Factors	611.156	Dollars					

Activity ID: 1GNE200110 Description: T-7 PAM Prep & Internal Rev - IHSS Group NE-2

Cost Risk 4 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	PAM Preparation	1.00	each	EE	320	320	9,893	42,288	0	52,181	3,492	55,673
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	8,589	8,589	0	8,589
Total for Activity 1GNE200110:						320	9,893	42,288	8,589	60,770	3,492	64,262

Line Item 0100 - PAM Preparation

BOE

Estimators Experience - Estimator has experience preparing an IM/IRA
Experience Item Desc - 903 Drum Storage IM/IRA
Breakdown of Cost Data:
Item - Site personnel hours, Subcontract dollars
Units - hours, dollars
Unit Cost - 320 Site hours, \$50,000 Subcontractor Dollars
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

Site hours

Estimate provides for 2.00 FTE for one month spread over the duration of the PAM (2 months). Includes K-H management, a Environmental Engineer and a compliance specialist.

Subcontract Dollars

Two subcontract FTE (engineer level at \$73/hour) full time for a peroid of two months. One admin support for 100 hours at \$32/hour

2 x 160 x 40 x \$73 = \$46,720

1 x 100 x \$32 = 3,200

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	160.00 Hours
Factors	160	Hours	Envir Enginner				
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	K266S	Envir. Safety. Health & Quality	Linear	160.00 Hours
Factors	160	Hours	Compliance Specialist (ARARs)				

WBS No: 1GAB0202
Activity ID: 1GNE200110

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	42,288.00	Dollars
Factors	50000	Dollars	Subcontractor					

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Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	5.987.27	Dollars
Factors	5987.27	Dollars			
ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	2.601.68	Dollars
Factors	2601.68	Dollars			

Activity ID: 1GNE200130 Description: T-7 Plannina & Document Preparation

Cost Risk 3 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Site Resource Support for Documentation	2.00	each	HC	1.600	3.200	80.506	0	0	80.506	28.161	108.667
20	Subcontractor Costs	1.00	each	EE	0	0	0	325.990	0	325.990	0	325.990
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	86.228	86.228	0	86.228
Total for Activity 1GNE200130:						3.200	80.506	325.990	86.228	492.723	28.161	520.885

Line Item 10 - Site Resource Support for Documentation

BOE

Estimator's Experience - Estimator interviewed Trench 1 field supervisor to identify Site resources required to complete documentation requirements
Experience Item Desc - T-1 Site Documentation
Breakdown of Cost Data:
Item - Labor hours
Units - Lot
Unit Cost - 3,200 Site Labor Hours (w months of site labor required)
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This work will be conducted primarily by subcontract personnel with site support. This basis of estimate assumes site personnel will be on the project for two months, the initial planning month and one additional month to review and provide input on draft documents.

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
750 STRAIGHT TIME BASE	E080 NUCLEAR (CRITICALITY) ENGINEER	R100S RMRS Salaried	Linear	160.00	Hours
Factors	160	Hours	1	crit.engineer	
750 STRAIGHT TIME BASE	G040 SECRETARIES	R100S RMRS Salaried	Linear	160.00	Hours
Factors	160	Hours	1	Admin	
750 STRAIGHT TIME BASE	L090 GENERAL LABORER	KG10H Remediation Steelworkers	Linear	160.00	Hours
Factors	160	Hours	1	laborer	
750 STRAIGHT TIME BASE	P080 HEALTH PHYSICISTS	R100S RMRS Salaried	Linear	160.00	Hours
Factors	160	Hours	1	Rad Engineer	
750 STRAIGHT TIME BASE	S020 ENVIRONMENTAL SCIENTISTS	R100S RMRS Salaried	Linear	160.00	Hours
Factors	160	Hours	1	Env. Scientist	
750 STRAIGHT TIME BASE	S030 GEOLOGISTS	R100S RMRS Salaried	Linear	160.00	Hours
Factors	160	Hours	1	geologist	
750 STRAIGHT TIME BASE	T050 RADIATION CONTROL TECHNOLOGI	KG10H Remediation Steelworkers	Linear	320.00	Hours
Factors	160	Hours	2	RCTs	
750 STRAIGHT TIME BASE	T060 D&D HAZ REDUC TECH / RISK RED	KG10H Remediation Steelworkers	Linear	320.00	Hours
Factors	160	Hours	2	Heavy equipment operators	

Line Item 20 - Subcontractor Costs

BOE

Estimator's Experience - Estimator interviewed Trench 1 field supervisor to identify Subcontractor resouces and time requirements to complete documentation requiriedments
Experience Item Desc - T-1 Site Documentation
Breakdown of Cost Data:
Item -Subcontractor costs
Units - Lot
Unit Cost - \$385,440 subcontract dollars

WBS No: 1GAB0202
Activity ID: 1GNE200130

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter * Starts In FY *

Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

T-1 cost report reported 5,413.13 Site personnel hours for planning and \$230,000 for subcontractor costs for a total of approximately \$500,000 T-1 was planned by site personnel.

The subcontractor costs were estimated by assuming 5.5 FTEs (engineer level) would be required for 6 month duration (5280 hours) totaling \$385,440 at \$73/hour.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS		0000	NONE	K265S	ER Programs	Linear	325.989.80	Dollars
Factors	73 Dollars		5.5 FTEs		8 hours per day		20 days per month		
	6 months						0.84576	ISYS 0614001	.84576000 - Svsstem

Line Item SYS - Contingency And Escalation

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	59.981.26	Dollars
Factors	59981.3 Dollars								
ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	26.246.73	Dollars
Factors	26246.7 Dollars								

Activity ID: 1GNE200150 Description: T-7 Procurement

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	RFP Review and Site Procurement	1.00	each		360	360	11.446	0	0	11.446	3.960	15.406
20	RFP Preparation	1.00	each		0	0	0	43.134	0	43.134	0	43.134
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	16.565	16.565	0	16.565
Total for Activity 1GNE200150:						360	11.446	43.134	16.565	71.145	3.960	75.105

Line Item 10 - RFP Review and Site Procurement

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE		E020	CIVIL ENGINEERS	K107S	Eng. Envir. Safety & Quality Programs	Linear	40.00	Hours
Factors	40 Hours								
750	STRAIGHT TIME BASE		E070	MECHANICAL ENGINEERS	K107S	Eng. Envir. Safety & Quality Programs	Linear	40.00	Hours
Factors	40 Hours								
750	STRAIGHT TIME BASE		E080	NUCLEAR (CRITICALITY) ENGINEER	K238S	Radiation Protection	Linear	40.00	Hours
Factors	40 Hours								
750	STRAIGHT TIME BASE		E110	QUALITY CONTROL ENGINEERS	K265S	ER Programs	Linear	40.00	Hours
Factors	40 Hours								
750	STRAIGHT TIME BASE		E120	SAFETY ENGINEERS	K266S	Envir. Safety, Health & Quality	Linear	40.00	Hours
Factors	40 Hours								
750	STRAIGHT TIME BASE		P030	BUYERS PROCUREMENT AND CON	K264S	Procurement Systems	Linear	160.00	Hours
Factors	160 Hours								

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE		E020	CIVIL ENGINEERS	K107S	Eng. Envir. Safety & Quality Programs	Linear	40.00	Hours
Factors	40 Hours								
750	STRAIGHT TIME BASE		E070	MECHANICAL ENGINEERS	K107S	Eng. Envir. Safety & Quality Programs	Linear	40.00	Hours
Factors	40 Hours								
750	STRAIGHT TIME BASE		E080	NUCLEAR (CRITICALITY) ENGINEER	K238S	Radiation Protection	Linear	40.00	Hours
Factors	40 Hours								
750	STRAIGHT TIME BASE		E110	QUALITY CONTROL ENGINEERS	K265S	ER Programs	Linear	40.00	Hours
Factors	40 Hours								
750	STRAIGHT TIME BASE		E120	SAFETY ENGINEERS	K266S	Envir. Safety, Health & Quality	Linear	40.00	Hours
Factors	40 Hours								
750	STRAIGHT TIME BASE		P030	BUYERS PROCUREMENT AND CON	K264S	Procurement Systems	Linear	160.00	Hours
Factors	160 Hours								

Line Item 20 - RFP Preparation

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
BOE	Estimators Experience - Estimator interviewed T-1 personnel who performed numerous subcontract support procurement and estimated resources required to complete RFP								

WBS No: 1GAB0202
Activity ID: 1GNE200150

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Experience Item Desc - T-1 Subcontractor Procurements
Item - Subcontract dollars
Units - lot
Unit Cost - 51,000 Dollars
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment - Comprehensive SOW/RFP for remediation of radiological facility, 903 Pad, 903 Lip Area and Americium Zone, and East Firing Range and Target Area.

Assumes 2 Engineers FTE for two months spread over the activity duration of 60 days. Also provides 160 of administrative support.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
A5H		SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	43.133.76	Dollars
Factors		51000 Dollars							

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Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
CON		CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	12.075.93	Dollars
Factors		12075.9 Dollars							
ESC		ESCALATION	0000	NONE	ZDEPT	No Department	Linear	4.489.16	Dollars
Factors		4489.16 Dollars							

Activity ID: 1GNE200160 Description: T-7 Field Prep/Mobilization/Readiness Assessment

Cost Risk 2 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Site Resource Hours	4.00	each	EE	6.680	26.720	771.909	0	0	771.909	267.080	1,038.989
20	Subcontractor Dollars & Supplies	1.00	each	EE	0	0	0	992.311	0	992.311	0	992.311
30	Leases	4.00	each	EE	0	0	0	494.320	0	494.320	0	494.320
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	707.229	707.229	0	707.229
Total for Activity 1GNE200160:						26.720	771.909	1,486.631	707.229	2,965.769	267.080	3,232.849

Line Item 10 - Site Resource Hours

BOE

Estimators Experience - Estimator interviewed T-1 Field Supervisor to determine resource needs for a excavation activity using site resources
Experience Item Desc - T-1 Excavation Mob (2 months) and readiness Assessment (1.5 months)
Breakdown of Cost Data:
Item - labor hours
Units - hours
Unit Cost - 6,680 hours per month (4 month activity duration)
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

Estimate based on labor resources assumed to be the same as those required to perform T-1 excavation.

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
750		STRAIGHT TIME BASE	E080	NUCLEAR (CRITICALITY) ENGINEER	R100S	RMRS Salaried	Linear	160.00	Hours
Factors		160 hours	1	Crit Engineer for AB					
750		STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K107S	Eno. Envir. Safetv & Quality Programs	Linear	160.00	Hours
Factors		160 Hours	1	QA					
750		STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	480.00	Hours
Factors		160 Hours	3	Managers Oversight					
750		STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors		160 Hours	1	Rad Engineer					
750		STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	K107S	Eno. Envir. Safetv & Quality Programs	Linear	160.00	Hours
Factors		160 Hours	1	Safetv					

WBS No: 1GAB0202
Activity ID: 1GNE200160

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project
WBS Filter
Activity Filter
Baseline Devl
1GAB
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Starts In FY *

750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KG10H	Remediation Steelworkers	Linear	2,080.00	Hours
Factors	160	Hours	13	RCTs				
750	STRAIGHT TIME BASE	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	480.00	Hours
Factors	40	Hours	12	D&D Worker OT				
751	OVERTIME BASE & PRE.	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	40	hours	2	Forman OT				
751	OVERTIME BASE & PRE.	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	320.00	Hours
Factors	160	hours	2	Foreman				
751	OVERTIME BASE & PRE.	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	120.00	Hours
Factors	40	Hours	3	Managers OT				
751	OVERTIME BASE & PRE.	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hours	1	Rad Eng OT				
751	OVERTIME BASE & PRE.	T050	RADIATION CONTROL TECHNOLIGI	KG10H	Remediation Steelworkers	Linear	520.00	Hours
Factors	40	Hours	13	RCT Overtime				
751	OVERTIME BASE & PRE.	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	1,920.00	Hours
Factors	160	Hours	12	D&D worker				

Line Item 20 - Subcontractor Dollars & Supplies

BOE

Estimator's Experience - Estimator interviewed T-1 Project Supervisor to determine subcontractor support requirements during remediation
Experience Item Desc - T-1 Remediation
Breakdown of Cost Data:
Item - Subcontracted Services
Units - month
Unit Cost - \$180,000 per month (4 month activity duration)
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

Assumes:

1 Project Manager
2 Project Supervisors
2 HSS Specialist
3 Waste Generators
1 Field Supervisor
1 Technician/Runner
2 Geologists to implement SAP

205 hours per person (12 personnel) per month at average of \$73 per hour = \$180,000 per month for 4 month duration = \$720,000

Estimator's Experience - Estimator interviewed T-1 Project Supervisor to determine subcontractor support requirements during remediation
Experience Item Desc - T-1 Remediation
Breakdown of Cost Data:
Item - Materials, Subcontract Dollars for weather Structure setup
Units - Lot
Unit Cost - \$256,500 Materials, \$150,000 Subcontract dollars
Unit Cost Adjustment factor -1
Revised Unit Cost -
Basis for adjustment -

The material costs include weather structure construction, miscellaneous material and supplies costs, soft sided waste packages, lifting device for a total of \$256,500.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	200,000.00	Dollars
Factors	200000	Dollars	1	Supplies				
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	28,500.00	Dollars
Factors	380	Dollars	75	Soft Side Waste Packages				

WBS No: 1GAB0202
Activity ID: 1GNE200160

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	28.000.00	Dollars
Factors	7000 Dollars	4	Soft Side Waste Pack Lifting Frame					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	126.864.00	Dollars
Factors	150000 Dollars	1	Weather Structure Constructions					
						0.84576 [SYS 061400]	.84576000 - Svsstem	
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	608.947.20	Dollars
Factors	180000 Dollars	4	months subcontract personnel					
						0.84576 [SYS 061400]	.84576000 - Svsstem	

Line Item 30 - Leases

BOE	Estimators Experience - Estimator interviewed Trench 1 field supervisor and project controls support to obtain rental equipment estimates Experience Item Desc - Trench 1 rental equipment Breakdown of Cost Data: Item - equipment rentals Units - month Unit Cost - \$123,580 per month (4 month activity duration) Unit Cost Adjustment factor - Revised Unit Cost - Basis for adjustment -							
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Resources	Cost Element		Skill		Department	Curve	Quantity	Units
	A5C SUPPLIES	0000	NONE	K265S	ER Programs	Linear	20.400.00	Dollars
Factors	17 Dollars	30	Men PPE	2	Suits per Day	20	Days per month	
	A5L RENTALS	0000	NONE	K265S	ER Programs	Linear	14.000.00	Dollars
Factors	14000 Dollars	1	Excavator					
	A5L RENTALS	0000	NONE	K265S	ER Programs	Linear	9.000.00	Dollars
Factors	9000 Dollars	1	Loader					
	A5L RENTALS	0000	NONE	K265S	ER Programs	Linear	5.000.00	Dollars
Factors	5000 Dollars	1	Water Truck					
	A5L RENTALS	0000	NONE	K265S	ER Programs	Linear	2.000.00	Dollars
Factors	500 Dollars	4	trailers					
	A5L RENTALS	0000	NONE	K265S	ER Programs	Linear	2.500.00	Dollars
Factors	2500 Dollars	1	Fork Lift					
	A5L RENTALS	0000	NONE	K265S	ER Programs	Linear	22.000.00	Dollars
Factors	11000 Dollars	2	Breathing Air Compressors					
	A5L RENTALS	0000	NONE	K265S	ER Programs	Linear	1.000.00	Dollars
Factors	1000 Dollars	1	Fence					
	A5L RENTALS	0000	NONE	K265S	ER Programs	Linear	80.00	Dollars
Factors	20 Dollars	4	Portollets					
	A5L RENTALS	0000	NONE	K265S	ER Programs	Linear	40.000.00	Dollars
Factors	40000 Dollars	1	H&S Support Equipment					
	A5N FUEL & UTILITIES	0000	NONE	K265S	ER Programs	Linear	2.000.00	Dollars
Factors	2000 Dollars	1	Fuel					
	A5R MISC EXPENSES	0000	NONE	K265S	ER Programs	Linear	5.600.00	Dollars
Factors	8 Dollars	35	Men Lunches	20	days per month			

Line Item SYS - Contingency And Escalation

BOE								
Resources	Cost Element		Skill		Department	Curve	Quantity	Units
	CON CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	513.550.70	Dollars
Factors	513551 Dollars							
	ESC ESCALATION	0000	NONE	ZDEPT	No Department	Linear	193.677.90	Dollars
Factors	193678 Dollars							

Activity ID: 1GNE200180 Description: T-7 Excavation/Demobilization/Reclamation

Cost Risk 4 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
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WBS No: 1GAB0202
Activity ID: 1GNE200180

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

10	Site resource Hours	4.00	each	HC	6,680	26,720	771,909	0	0	771,909	220,031	991,940
20	Subcontractor Costs	1.00	each	HC	0	0	0	1,611,925	0	1,611,925	0	1,611,925
30	Leases	4.00	each	EE	0	0	0	494,320	0	494,320	0	494,320
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	536,895	536,895	0	536,895
Total for Activity 1GNE200180:						26,720	771,909	2,106,245	536,895	3,415,048	220,031	3,635,079

Line Item 10 - Site resource Hours

BOE	Estimators Experience - Estimator interviewed T-1 Field Supervisor to determine resource needs for a excavation activity using site resources Experience Item Desc - T-1 Excavation excavation Breakdown of Cost Data: Item - labor hours Units - hours Unit Cost - 6,680 hours per month (4 month activity duration) Unit Cost Adjustment factor - Revised Unit Cost - Basis for adjustment - Estimate based on labor resources assumed to be the same as those required to perform T-1 excavation.
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Resources	Cost Element		Skill		Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	E080	NUCLEAR (CRITICALITY) ENGINEER	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160 hours		1 Crit Engineer for AB					
	750 STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K107S	Eno. Envir. Safetv & Quality Programs	Linear	160.00	Hours
Factors	160 Hours		1 QA					
	750 STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	480.00	Hours
Factors	160 Hours		3 Managers Oversight					
	750 STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160 Hours		1 Rad Engineer					
	750 STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	K107S	Eno. Envir. Safetv & Quality Programs	Linear	160.00	Hours
Factors	160 Hours		1 Safetv					
	750 STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLOGI	KG10H	Remediation Steelworkers	Linear	2,080.00	Hours
Factors	160 Hours		13 RCTs					
	750 STRAIGHT TIME BASE	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	480.00	Hours
Factors	40 Hours		12 D&D Worker OT					
	751 OVERTIME BASE & PRE.	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	320.00	Hours
Factors	160 hours		2 Foreman					
	751 OVERTIME BASE & PRE.	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	40 hours		2 Forman OT					
	751 OVERTIME BASE & PRE.	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	120.00	Hours
Factors	40 Hours		3 Managers OT					
	751 OVERTIME BASE & PRE.	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 hours		1 Rad Eno OT					
	751 OVERTIME BASE & PRE.	T050	RADIATION CONTROL TECHNOLOGI	KG10H	Remediation Steelworkers	Linear	520.00	Hours
Factors	40 Hours		13 RCT Overtime					
	751 OVERTIME BASE & PRE.	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	1,920.00	Hours
Factors	160 Hours		12 D&D worker					

Line Item 20 - Subcontractor Costs

BOE	Estimator's Experience - Estimator interviewed T-1 Project Supervisor to determine subcontractor support requirements during remediation Experience Item Desc - T-1 Remediation Breakdown of Cost Data: Item - Subcontracted Services Units - month Unit Cost - \$180,000 per month (4 month activity duration) Unit Cost Adjustment factor - Revised Unit Cost - Basis for adjustment - Assumes:
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WBS No: 1GAB0202
Activity ID: 1GNE200180

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

1 Project Manager
2 Project Supervisors
2 HSS Specialist
3 Waste Generators
1 Field Supervisor
1 Technician/Runner
2 Geologists to implement SAP

205 hours per person (12 personnel) per month at average of \$73 per hour = \$180,000 per month for 4 month duration = \$720,000

Estimator's Experience - Estimator interviewed T-1 Project Supervisor to determine subcontractor support requirements during remediation
Experience Item Desc - T-1 Remediation
Breakdown of Cost Data:
Item -Materials
Units - Lot
Unit Cost - \$1,074,650
Unit Cost Adjustment factor -1
Revised Unit Cost -
Basis for adjustment -

The material costs include costs for reclamation, supplies, weather sturcture teardown, analytical costs, and air sampling costs.

LAB SAMPLES

Confirmation sample

One sample required for base of excavation and two sides for every 10 linear feet of excavated trench. Since trench is 120 feet long assume excavation is 140 feet long. 3 samples X 140/10 + 2 (samples collect at ends of excavation) = 44 * 1.2 (QA samples) = 53 samples for rad, metals, semi- vocs and vocs.

Waste Acceptance

7.4 soft sided bags - assumes 10% of waste packages will require sampling for Envirocare WAC. 83 bags * 0.10 = 8.5 samples *1.2 (QA) = 10.2 samples for Rads, metal, voc, semi-vocs.

Air

Air Monitoring group provided a cost estimate for 384K for 18 months on 903 Pad Project which is 21.3k per month. Assuming a 3 month excavation duration air monitoring costs are estimated at 64K.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	130.125.00	Dollars
Factors	15 Dollars yd3		8675 Backfill yd3					
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	42.000.00	Dollars
Factors	21000 Dollars acre		2 Topsoil + labor per acre					
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	200.000.00	Dollars
Factors	200000 Dollars		1 Supplies					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	608.947.20	Dollars
Factors	180000 Dollars		4 months subcontract personnel					
						0.84576	ISYS 0614001	.84576000 - Svsstem
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	126.864.00	Dollars
Factors	150000 Dollars		1 Weather Structure tear down					
						0.84576	ISYS 0614001	.84576000 - Svsstem
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	54.044.06	Dollars
Factors	21300 Dollars		3 Air monitoring (cost per month)					
						0.84576	ISYS 0614001	.84576000 - Svsstem

WBS No: 1GAB0202
Activity ID: 1GNE200180

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

A5H	SUBCONTRACTED SRVS	0000	NONE	K267S	Analytical Laboratory Services	Linear	449,944.30	Dollars
Factors	532000 Dollars	1	Laboratory Confirmation/WAC/aw/sw					

0.84576 [SYS 061400] .84576000 - System

Line Item 30 - Leases

BOE
Estimators Experience - Estimator interviewed Trench 1 field supervisor and project controls support to obtain rental equipment estimates
Experience Item Desc - Trench 1 rental equipment
Breakdown of Cost Data:
Item - equipment rentals
Units - month
Unit Cost - \$123,580 per month (4 month activity duration)
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment - monthly rate provided on resource list

Resources	Cost Element		Skill		Department	Curve	Quantity	Units
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	20.400.00	Dollars
Factors	17 Dollars	30	Men PPE	2	Suits per Day	20	Days per month	
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	2.000.00	Dollars
Factors	500 Dollars	4	trailers					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	2.500.00	Dollars
Factors	2500 Dollars	1	Fork Lift					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	22.000.00	Dollars
Factors	11000 Dollars	2	Breathing Air Compressors					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	1.000.00	Dollars
Factors	1000 Dollars	1	Fence					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	80.00	Dollars
Factors	20 Dollars	4	Portoliets					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	40.000.00	Dollars
Factors	40000 Dollars	1	H&S Support Equipment					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	14.000.00	Dollars
Factors	14000 Dollars	1	Excavator					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	9.000.00	Dollars
Factors	9000 Dollars	1	Loader					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	5.000.00	Dollars
Factors	5000 Dollars	1	Water Truck					
A5N	FUEL & UTILITIES	0000	NONE	K265S	ER Programs	Linear	2.000.00	Dollars
Factors	2000 Dollars	1	Fuel					
A5R	MISC EXPENSES	0000	NONE	K265S	ER Programs	Linear	5.600.00	Dollars
Factors	8 Dollars	35	Men Lunches	20	days per month			

Line Item SYS - Contingency And Escalation

Resources	Cost Element		Skill		Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	242,313.80	Dollars
Factors	242314 Dollars							
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	294,580.80	Dollars
Factors	294581 Dollars							

Activity ID: 1GNE200240 Description: T-7 Closure Report Preparation - IHSS Grp NE-2

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	Closure Repor Prep	2.00	each	EE	160	320	9,459	44,927	0	54,386	2,667	57,053
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	8,209	8,209	0	8,209
Total for Activity 1GNE200240:						320	9,459	44,927	8,209	62,595	2,667	65,262

Line Item 0100 - Closure Repor Prep

BOE
Estimators Experience - Estimator experienced with the preparation of similar report type documents

WBS No: 1GAB0202
Activity ID: 1GNE200240

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Experience Item Desc - 903 Pad Characterization report
Breakdown of Cost Data:
Item - Subcontract dollars
Units - lot
Unit Cost - \$26,560
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

Assumes 2 subcontractor FTEs (Engineer level) full time (160 hrs) per month for one month at \$73/hour. One admin assist for 100 hours at \$32/hour

2 x 160 x \$73 = \$23,360
1 x 100 x \$32 = \$ 3,200

Estimators Experience - Estimator experienced with the preparation of similar report type documents
Experience Item Desc - 903 Pad Characterization Report
Breakdown of Cost Data:
Item - Site resource hours
Units - hours
Unit Cost - 160 hours
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

Assumes 1 FTE for one month

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	160.00 Hours
Factors		160 hrs					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	22.463.38 Dollars
Factors		26560 sub/c support					

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	2.730.72 Dollars
Factors		2730.72 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	5.478.06 Dollars
Factors		5478.06 Dollars					

WBS No: 1GAB0203 Title: Group NE/NW

Activity ID: 1GNENW0100 Description: Planning IHSS - Group NE/NW

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	SAP/HASP	1.00	each	EE	300	300	9.724	1.421	0	11.145	3.433	14.578
0200	PAM	1.00	each	EE	432	432	12.463	0	0	12.463	4.399	16.863
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	4.748	4.748	0	4.748
Total for Activity 1GNENW0100:						732	22.188	1.421	4.748	28.356	7.832	36.188

Line Item 0100 - SAP/HASP

BOE

Estimator's Experience: 15 years of experience planning, estimating and conducting projects of similar scope and size. (S.Serreze)
Item Desc:Preparation of SAP Addendums
Breakdown of Cost Data:
Item: Prepare SAP, HASP and QAP addendum. Address KH, DOE and regulatory agency comments.
Units: hours
Unit Cost: 340
Unit Cost Adjustment Factor: none
Revised Unit Hours: 340

WBS No: 1GAB0203
Activity ID: 1GNENW0100

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter * Starts In FY *

Basis for adjustment: None

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	100.00	Hours
Factors	100	hrs						
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs						
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs						
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs						
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs						
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	1,420.88	Dollars
Factors	42	estimated \$/hr	40	hrs				

0.84576 [SYS 061400] .84576000 - System

Line Item 0200 - PAM

BOE

Estimator's Experience based generally on historical data for Ryan's Pit

Item Desc:

Preparation of PAM in support of source removal of previously characterized UBC.

Breakdown of Cost Data:

Item: Preparation of PAM for Ryan's Pit source removal action modified to include GIS support.

Units: hours

Unit Cost: 40 hours GIS support, 72 hours project manager technical support, 628 hours for technical staff to write document.

Unit Cost Adjustment Factor: None

Revised Unit Hours: None

Basis for adjustment. Technical staff support was reduced by about 1/2 due to the lesser complexity of this project. Assumed that 2 people would take 1 month to write this for 320 hours.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	320.00	Hours
Factors	320	hrs						
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	72.00	Hours
Factors	72	hrs						
750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs						

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	3,278.36	Dollars
Factors	3278.36	Dollars						
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1,469.26	Dollars
Factors	1469.26	Dollars						

Activity ID: 1GNENW0120 Description: Field Preparation - Group NE/NW

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	field prep	1.00	each	EE	300	300	8,644	710	0	9,354	3,051	12,405
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	1,854	1,854	0	1,854

WBS No: 1GAB0203
Activity ID: 1GNENW0120

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Total for Activity 1GNENW0120:

300	8,644	710	1,854	11,208	3,051	14,259
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Line Item 0100 - field prep

BOE	Estimator's Experience based on 10 years of experience planning, estimating, and conducting projects of similar scope and size.					
	Item Desc: Prepare Ecology Survey/NEPA Support, and Utility Clearance/Soil Disturbance Permit.					
	Breakdown of Cost Data: Item: Prepare field permits, purchase equip, identify utilities, training Units: hours Unit Cost: 320 Unit Cost Adjustment Factor: none Revised Unit: none					
	This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.					

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
	Factors	80	hrs						
	750	STRAIGHT TIME BASE	E120	SAFETY ENGINEERS	R100S	RMRS Salaried	Linear	20.00	Hours
	Factors	20	hrs						
	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	40.00	Hours
	Factors	40	hrs						
	750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	80.00	Hours
	Factors	80	hrs						
	750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	hs							
	A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	0.00	Dollars
Factors	0	Dollars							
	A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	710.44	Dollars
Factors	20	hrs	42	estimated \$/hr - RMRS Corp					
							0.84576	ISYS 0614001 .84576000 - Svstem	
							0.84576	ISYS 0614001 .84576000 - Svstem	

Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	1,274.41	Dollars
	Factors 1274.41 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	579.71	Dollars
	Factors 579.714 Dollars									

Activity ID: 1GNENW0140

Description: Readiness Review - Group NE/NW

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0010	readiness assessment	1.00	each	EE	240	240	7,842	2,436	0	10,278	2,768	13,047
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	1,950	1,950	0	1,950
Total for Activity 1GNENW0140:						240	7,842	2,436	1,950	12,228	2,768	14,997

Line Item 0010 - readiness assessment

BOE	Estimator's Experience based on 15 years of experience planning, estimating and conducting projects of similar scope and size.					
	Item Desc: Evaluate readiness of the field characterization team and plans.					
	Breakdown of Cost Data: Item: Perform readiness evaluation Units: hours Unit Cost: 240					

WBS No: 1GAB0203
Activity ID: 1GNENW0140

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Unit Cost Adjustment Factor: none
Revised Unit Hours: 240

Basis for adjustment. None

\$1,200 for minimal site training and equipment mobilization.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE		E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	hrs								
750	STRAIGHT TIME BASE		G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	40.00	Hours	
Factors	40	hrs								
750	STRAIGHT TIME BASE		M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	40.00	Hours	
Factors	40	hrs								
750	STRAIGHT TIME BASE		P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours	
Factors	40	hrs								
750	STRAIGHT TIME BASE		P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	40.00	Hours	
Factors	40	hrs								
A5H	SUBCONTRACTED SRVS		0000	NONE	K265S	ER Programs	Linear	1.014.91	Dollars	
Factors	1200	Dollars								
									0.84576	ISYS 0614001.84576000 - Svsstem
A5H	SUBCONTRACTED SRVS		P170	OTHER ADMINISTRATIVE & PROFE	K265S	ER Programs	Linear	1.420.88	Dollars	
Factors	42	estimated \$/hr		40	hrs					

0.84576 [SYS 061400] .84576000 - Svstem
0.84576 [SYS 061400] .84576000 - Svstem

Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	1.340.30	Dollars
	Factors 1340.3 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	609.68	Dollars
	Factors 609.684 Dollars									

Activity ID: 1GNENW0150 Description: Field Characterization - Group NE/NW

Cost Risk 4 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	Geoprobe characterization	1.00	each	EE	192	192	5.386	5.575	0	10.960	1.901	12.861
0200	analvze samples	1.00	each	VQ	0	0	0	46.036	0	46.036	0	46.036
0300	project mamt oversight	1.00	each	EE	160	160	3.538	2.842	0	6.379	1.249	7.628
0400	IHSS 174a remedial action	1.00	each	EE	70	70	1.972	42.288	0	44.260	696	44.956
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	17.199	17.199	0	17.199
Total for Activity 1GNENW0150:						422	10.895	96.741	17.199	124.834	3.846	128.680

Line Item 0100 - Geoprobe characterization

BOE	Estimator's Experience. 10 years experience and input from Steve Singer, Site groundwater expert and landlord of the geoprobe.
	The characterization activity consists of drilling 3 geoprobe boreholes in each trench to a depth of 2 feet below the trenches (12 feet) at each of PAC NE-1412 and PAC NE-1413 for a total of 6 boreholes. Samples will be collected every 2 feet and analyzed for radionuclides and VOCs. NE-1413 soil samples will also be analyzed for PCBs.
	Item Desc: Collection of soil samples. A site Environmental Engineer will direct the sample collection, containerize, package, and ship the samples; prepare field QC documentation, and prepare field notes on a full time basis. A site RCT will monitor the site for radiological contamination on a full time basis. A site Industrial Hygieneist will implement the field portion of the HASP on a full time basis.
	Breakdown of Cost Data:

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Item: Site Personnel for support of sample collection The effort is expected to take 8 days including mobilization and demobilization of equipment and personnel. As per similar projects, full time RCT and HSS support will be required as well as a fulltime project manager who will also be the project's technical support. Supplies are expected to cost \$500 based on similar small projects.

Units: hours
Unit Cost: 8 days at 8 hour days = 64 hours per person
Unit Cost Adjustment Factor: none
Revised Unit Hours:

Item - Geoprobe sample collection. As per Steve Singer, Site Groundwater expert, the Site owned Geoprobe can drill 2, 10 foot deep boreholes per day. The cost per day is approximately \$2,000 per day and includes the geoprobe operators, the sample collection and shipment team, sample data entry, and PPE. 6 Geoprobe borings will take 3 days for a cost of \$6,000.

1 each at \$6,000
Unit Cost Adjustment factor - none
Revised Unit Cost - na
Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	64.00	Hours
Factors 64 hrs								
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	64.00	Hours
Factors 64 hrs								
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLOGI	KG10H	Remediation Steelworkers	Linear	64.00	Hours
Factors 64 hrs								
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	500.00	Dollars
Factors 500 \$								
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	5,074.56	Dollars
Factors 6000 \$								

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Line Item 0200 - analyze samples

BOE

Vendor Quote
Data provided by KH ASD during the rebaselining effort.

Item Desc:
Analyze samples, they will be anlyzed for PCBs. This item is priced on a per sample basis.

3 boreholes at T-12 samples every 2 feet for 12 foot total depth = 18 samples with 9 QA/QC samples. Analyze for rads and vocs

3 boreholes at T-13 samples every 2 feet for 12 foot total depth = 18 samples with 9 QA/QC samples. Analyze for PCBs, rads and vocs.

Breakdown of Cost Data:
Item: Analyze samples at an offsite laboratory.
Units: analysis
Unit Cost:
54 rad screens at \$32 each = \$1,728
54 isotopics at \$590 each = \$31,860
54 VOCs at \$280 each = \$15,120
27 PCBs (other industrial hygiene) @ \$150 each = \$4,050
Data validation will be done for 3 sets of 20 samples each
3 VOC Data validation cost for > 11 samples at \$246 each = \$738
3 rad data validation costs for >11 samples at \$312 each = \$936

Total Unit A5H costs are \$54,432. Shipping and bottle charges are included in Geoprobe rate
Unit Cost Adjustment Factor:
Revised Unit Hours:

Basis for adjustment: None

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

WBS No: 1GAB0203
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	A5H	SUBCONTRACTED SRVS	0000	NONE	K267S	Analvtical Laboratory Services	Linear	46.036.41	Dollars
	Factors	54432	\$						

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Line Item 0300 - project mgmt oversight

BOE	Estimator's Experience Item Desc: Four week field task. Project Management/Oversight. Based on half time for a Project Manager, Administrative staff, and Cost Estimator/Scheduler Breakdown of Cost Data: Item: Mgmt oversight Units: hours Unit Cost: 80 hours per person Unit Cost Adjustment Factor: none Revised Unit Hours: Basis for adjustment. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	80.00	Hours
	Factors	80 hrs							
	750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	80.00	Hours
	Factors	80 hrs							
	A5H	SUBCONTRACTED SRVS	P170	OTHER ADMINISTRATIVE & PROFE	K265S	ER Programs	Linear	2,841.75	Dollars
	Factors	80 hrs	42	estimated \$/hr					

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Line Item 0400 - IHSS 174a remedial action

BOE	A limited remedial action will be completed for IHSS 174a. An in-situ bioremediation technology is assumed for this source and will consist of drilling and installing 3 geoprobe wells around the identified source area, with injection of patented material into the wells. No recirculation of material or groundwater pumping will occur. Material will be left in the borehole to naturally degrade. Based on preliminary data from presentations, a one-time application is expected to take 5 days and cost \$50,000. Additional treatment will not be required. Estimators Experience - 5 years groundwater remediation Experience Item Desc - Breakdown of Cost Data: Item - in-situ bioremediation of VOCs Units - 1 each Unit Cost - \$50,000 Unit Cost Adjustment factor - none Revised Unit Cost - n/a Basis for adjustment - n/a Full time field support is required as well as project support. These resources are derived from similar projects such as IHSS 118.1. No samples will be collected during the remedial action. Env Engineer full time = 40 hours Secretarial support at 25% FTE = 10 hours Planning support 25% FTE = 10 hours Industrial Hygiene support 25% FTE = 10 hours This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
	Factors	40	Hours						
	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	10.00	Hours
	Factors	10	h						

WBS No: 1GAB0203
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750	STRAIGHT TIME BASE	P070	COST ESTIMATORS PLANNERS AN	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	10	h						
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	10	h						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	42,288.00	Dollars
Factors	50000	\$						

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	11.989.12	Dollars
Factors	11989.1	Dollars			
ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	5.209.69	Dollars
Factors	5209.69	Dollars			

Activity ID: 1GNENW0170 Description: Prepare NFA - Group NE/NW

Cost Risk 2 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	develop documentation	1.00	each	EE	138	138	4,061	0	0	4,061	1,431	5,492
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	851	851	0	851
Total for Activity 1GNENW0170:						138	4,061	0	851	4,912	1,431	6,343

Line Item 0100 - develop documentation

BOE

Estimator's Experience:
This estimate was constructed based on actual hours required to complete previous NFA Reports (obtained from actual author) and professional judgement of level of effort required for remaining reports.

Item Desc:
Perform Data Analysis including GIS representation of data, Characterization Report, and associated project management.

Breakdown of Cost Data:
Item: Develop Documentation
Units: Hours
Unit Cost: 138

Environmental Engineer	45 hrs	Evaluate & assemble existing data. Draft Report.
SWD Technician	10 hrs	Identify & pull existing data from database.
GIS Technician	15 hrs	Develop maps for Report. Print multiple copies.
Technical Editor	15 hrs	Complete initial and revised tech edits of Report.
Technical Reviews		
QA	4 hrs	Review and comment per area of expertise.
Peer (2)	8 hrs	Review and comment per area of expertise.
Compliance	4 hrs	Review and comment per area of expertise.
Environmental	4 hrs	Review and comment per area of expertise.
Management (2)	8 hrs	Review and comment per area of expertise.
Legal	4 hrs	Review and comment per area of expertise.
Environmental Engineer	15 hrs	Disposition comments and finalize document.
Administrative Support	6 hrs	Copy & assemble final documents, submit to records.

Unit Cost Adjustment Factor: none
Revised Unit Hours: 138
Basis for adjustment. N/A

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	60.00	Hours
Factors	60	hrs			
750 STRAIGHT TIME BASE	E110 QUALITY CONTROL ENGINEERS	R100S RMRS Salaried	Linear	4.00	Hours
Factors	4	hrs			
750 STRAIGHT TIME BASE	G010 ADMINISTRATIVE ASSISTANTS	R100S RMRS Salaried	Linear	6.00	Hours
Factors	6	hrs			

WBS No: 1GAB0203
Activity ID: 1GNENW0170

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750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	4.00	Hours
Factors	4	hrs						
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	K265S	ER Programs	Linear	4.00	Hours
Factors	4	hrs						
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K109S	Env Sys. Stewardship & Compliance	Linear	4.00	Hours
Factors	4	hrs						
750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	K215S	Information Resource Mgt	Linear	25.00	Hours
Factors	25	hrs						
750	STRAIGHT TIME BASE	P160	TECHNICAL WRITERS AND EDITOR	R100S	RMRS Salaried	Linear	15.00	Hours
Factors	15	hrs						
750	STRAIGHT TIME BASE	P170	OTHER ADMINISTRATIVE & PROFE	K101S	General Counsel	Linear	4.00	Hours
Factors	4	hrs						
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	K253S	Remediation, Industrial & Site Serv	Linear	4.00	Hours
Factors	4	hrs						
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	8.00	Hours
Factors	8	hrs						

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	581.14	Dollars
Factors	581.143	Dollars			
ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	269.86	Dollars
Factors	269.861	Dollars			

WBS No: 1GAB0204 Title: Group 900-2 (Oil Burn Pit/Pallet Burn Si
Activity ID: 1G90020000 Description: Planning/Procurement IHSS - Group 900-2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	SAP/HASP/SOW	1.00	each	EE	340	340	9.830	0	0	9.830	3.470	13.299
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	2.008	2.008	0	2.008
Total for Activity 1G90020000:						340	9.830	0	2.008	11.838	3.470	15.308

Line Item 0100 - SAP/HASP/SOW

BOE

Estimator's Experience: 10 years of experience planning, estimating and conducting projects of similar scope and size. (A Primrose)
Item Desc:Preparation of SAP Addendums. This is a limited investigation for a small area. Most of the contaminated soils were probably removed during construction of the PSZ fence, so confirmation samples only will be required.
Breakdown of Cost Data: Item: Prepare SAP and HASP addenda. Address KH, DOE and regulatory agency comments. The estimate included the limited procurement activities required to utilize on site subcontractors and is based on other limited sampling projects such as that for IHSS 118.1. Units: hours Unit Cost: 340 Unit Cost Adjustment Factor: none Revised Unit Hours: 340 E050 Environmental Engineer 2.5 Weeks for document development M030 Project Management 10% oversight of project P090 Industrial Hygienist 1 week for HASP development P080 Health Physicist 1 week for ALARA review and RWP G040 Administrative 40 hours Secretarial support for document prep and distribution E110 Quality Control Engineers 40 hours for document review and comment resolution P070 Project Controls 40 hours planning and scheduling support based on similar projects. Total = 340 hours

WBS No: 1GAB0204
Activity ID: 1G90020000

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Baseline Cost and Basis of Estimate

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Basis for adjustment: None

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	100.00	Hours
Factors 100 hrs								
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors 40 hrs								
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	40.00	Hours
Factors 40 hrs								
750	STRAIGHT TIME BASE	P070	COST ESTIMATORS PLANNERS AN	R100S	RMRS Salaried	Linear	40.00	Hours
Factors 40 hrs								
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors 40 hrs								
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors 40 hrs								
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors 40 hrs								

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1.386.75	Dollars
Factors 1386.76 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	621.50	Dollars
Factors 621.502 Dollars								

Activity ID: 1G90020020

Description: Field Preparation - Group 900-2

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	field prep	1.00	each	EE	380	380	13.172	0	0	13.172	4.650	17.822
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	2.691	2.691	0	2.691
Total for Activity 1G90020020:						380	13.172	0	2.691	15.863	4.650	20.513

Line Item 0100 - field prep

BOE

Estimator's Experience 10 years of experience planning, estimating and conducting projects of similar scope and size. (A Primrose)												
Item Desc: Prepare Radiological Work Permit, Ecology Survey/NEPA Support, and Utility Clearance/Soil Disturbance Permit. This is a routine activity with extensive involvement from project staff to develop these documents.												
Breakdown of Cost Data: Item: Prepare field permits, purchase equip, identify utilities, training Units: hours Unit Cost: 380 Unit Cost Adjustment Factor: none Revised Unit: none												
E050 Environmental Engineer 120 hours/full time for 3 weeks for document development M030 Project Management 80 hrs 2/3 support for issue resolution and oversight of project P090 Industrial Hygienist 80 hrs 2/3 support for issue resolution P080 Health Physicist 40 hr 1/3 time to prepare RWP G040 Administrative 40 hours Secretarial support for document prep and distribution P070 Project Controls 20 hours planning and scheduling support based on similar projects.												
Total = 380 hours												

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	120.00	Hours
Factors 120 hrs								

WBS No: 1GAB0204
Activity ID: 1G90020020

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750	STRAIGHT TIME BASE	E120	SAFETY ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	hrs						
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs						
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	hrs						
750	STRAIGHT TIME BASE	P070	COST ESTIMATORS PLANNERS AN	R100S	RMRS Salaried	Linear	20.00	Hours
Factors	20	hrs						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs						

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	1.858.33	Dollars
Factors	1858.33	Dollars			
ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	832.85	Dollars
Factors	832.847	Dollars			

Activity ID: 1G90020040 Description: Readiness Review - Group 900-2

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	readiness assessment	1.00	each	EE	240	240	7.842	1.421	0	9.263	2.768	12.032
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	1.798	1.798	0	1.798
Total for Activity 1G90020040:						240	7.842	1.421	1.798	11.062	2.768	13.830

Line Item 0100 - readiness assessment

BOE

Estimator's Experience based on 15 years of experience planning, estimating and conducting projects of similar scope and size.

Item Desc:
Evaluate readiness of the field characterization team and plans.

Breakdown of Cost Data:
Item: Perform readiness evaluation
Units: hours
Unit Cost: 240
Unit Cost Adjustment Factor: none
Revised Unit Hours: 240

Basis for adjustment. None

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	80.00	Hours
Factors	80	hrs			
750 STRAIGHT TIME BASE	G010 ADMINISTRATIVE ASSISTANTS	R100S RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs			
750 STRAIGHT TIME BASE	M020 MANAGERS (GRADE 69 - 72)	R100S RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs			
750 STRAIGHT TIME BASE	P080 HEALTH PHYSICISTS	R100S RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs			
750 STRAIGHT TIME BASE	P090 INDUSTRIAL HYGIENISTS	R100S RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs			
A5H SUBCONTRACTED SRVS	P170 OTHER ADMINISTRATIVE & PROFE	K265S ER Programs	Linear	1.420.88	Dollars
Factors	42	estimated \$/hr			
	40	hrs			

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WBS No: 1GAB0204
Activity ID: 1G90020040

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WBS Filter 1GAB
Activity Filter *

Starts In FY *

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1.236.03	Dollars
Factors 1236.03 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	562.26	Dollars
Factors 562.256 Dollars								

Activity ID: 1G90020050 Description: Field Characterization - Group 900-2

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	collect soil samples	1.00	each	EE	288	288	8.593	6.766	0	15.359	3.033	18.392
0200	analyze samples	1.00	each	VQ	0	0	0	32.218	0	32.218	0	32.218
0300	project mamt oversight	1.00	each	EE	58	58	1.944	0	0	1.944	686	2.630
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	8.039	8.039	0	8.039
Total for Activity 1G90020050:						346	10.537	38.984	8.039	57.561	3.719	61.280

Line Item 0100 - collect soil samples

BOE

Estimator's Experience
Item Desc: Collection of soil samples. A site Environmental Engineer will direct the sample collection, containerize, package, and ship the samples; prepare field QC documentation, and prepare field notes on a full time basis. A site RCT will monitor the site for radiological contamination on a full time basis. A site Industrial Hygieneist will implement the field portion of the HASP on a full time basis.
Breakdown of Cost Data: Item: Site Personnel for support of sample collection The effort is expected to take 12 days including mobilization and demobilization of equipment and personnel. As per similar projects, full time RCT and HSS support will be required as well as a fulltime project manager who will also be the project's technical support. Units: hours Unit Cost: 12 days at 8 hour days = 96 hours per person Unit Cost Adjustment Factor: none Revised Unit Hours:
Item - Geoprobe sample collection. As per Steve Singer, Site Groundwater expert, the Site owned Geoprobe can drill 2, 10 foot deep boreholes per day. The cost per day is approximately \$2,000 per day and includes the geoprobe operators, the sample collection and shipment team, sample data entry, and PPE. 8 Geoprobe borings will take 4 days for a cost of \$8,000.
1 each at \$8,000 Unit Cost Adjustment factor - none Revised Unit Cost - na Basis for adjustment - none
This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E120	SAFETY ENGINEERS	R100S	RMRS Salaried	Linear	96.00	Hours
Factors 96 hrs								
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	96.00	Hours
Factors 96 hrs								
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLOGI	KG10H	Remediation Steelworkers	Linear	96.00	Hours
Factors 96 hrs								
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	6.766.08	Dollars
Factors 8000 d								

0.84576 [SYS 061400] .84576000 - System

Line Item 0200 - analyze samples

BOE

Vendor Quote

WBS No: 1GAB0204
Activity ID: 1G90020050

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

From Kaiser-Hill ASD spreadsheet.

Item Desc:

Analyze samples, they will be analyzed for uranium isotopes and VOCs. This is priced on a per sample basis from the information provided by Kaiser Hill ASD for the baseline effort.
40 real samples and 20 QA/QC samples will be collected and analyzed offsite. Cost includes shipping, data validation, bottle charges, etc.

Breakdown of Cost Data:

Item: Analyze samples at an offsite laboratory.

Units: analysis

Unit Cost:

60 rad screens at \$32 each = \$1,920

60 isotopics at \$295 each (\$590 each reduced 50% for uranium isotopes only)= \$17,700

60 VOCs at \$280 each = \$16,800

Data validation will be done for 3 sets of 20 samples each

3 VOC Data validation cost for > 11 samples at \$246 each = \$738

3 rad data validation costs for >11 samples at \$312 each = \$936

Total Unit A5H costs are \$38,094. Shipping and bottle charges are included in Geoprobe rate

Unit Cost Adjustment Factor: NA

Revised Unit Hours:

Basis for adjustment: NA

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	A5H	SUBCONTRACTED SRVS	0000	NONE	K267S	Analytical Laboratory Services	Linear	32.21838	Dollars

Factors 38094 dollars

0.84576 [SYS 061400] .84576000 - Ssystem

Line Item 0300 - project mgmt oversight

BOE	Estimator's Experience								
	Item Desc: Project Management/Oversight. Additional hours will be used for project management, secretarial support, budget staff.								
	Breakdown of Cost Data:								
	Item: Mgmt oversight								
	Units: hours								
	Unit Cost: Based on a 12 day project, this will be 1/4 time for the secretary and Project Manager (24 hours each), 10 hours for the Cost								
	Estimator/Scheduler.								
	Unit Cost Adjustment Factor: none								
	Revised Unit Hours:								
	Basis for adjustment.								

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	24.00	Hours

Factors 24 hrs

750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	24.00	Hours
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Factors 24 hrs

750	STRAIGHT TIME BASE	P170	OTHER ADMINISTRATIVE & PROFE	R100S	RMRS Salaried	Linear	10.00	Hours
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Factors 10 hrs

Line Item SYS - Contingency And Escalation

BOE									
	Item Desc:								
Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	5.55148	Dollars

Factors 5551.48 Dollars

ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	2.488.01	Dollars
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Factors 2488.01 Dollars

Activity ID: 1G90020070 Description: Prepare NFA - Group 900-2

Cost Risk 2 Schedule Risk 3

WBS No: 1GAB0204
Activity ID: 1G90020070

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	develop NFA documentation	1.00	each	EE	138	138	4,164	0	0	4,164	1,470	5,634
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	851	851	0	851
Total for Activity 1G90020070:						138	4,164	0	851	5,015	1,470	6,485

Line Item 0100 - develop NFA documentation

BOE

Estimator's Experience:
This estimate was constructed based on actual hours required to complete previous NFA Reports (obtained from actual author) and professional judgement of level of effort required for remaining reports.

Item Desc:
Perform Data Analysis including GIS representation of data, Characterization Report, and associated project management.

Breakdown of Cost Data:
Item: Develop Documentation
Units: Hours
Unit Cost: 138

Environmental Engineer	45 hrs	Evaluate & assemble existing data. Draft Report.
SWD Technician	10 hrs	Identify & pull existing data from database.
GIS Technician	15 hrs	Develop maps for Report. Print multiple copies.
Technical Editor	15 hrs	Complete initial and revised tech edits of Report.
Technical Reviews		
QA	4 hrs	Review and comment per area of expertise.
Peer (2)	8 hrs	Review and comment per area of expertise.
Compliance	4 hrs	Review and comment per area of expertise.
Environmental	4 hrs	Review and comment per area of expertise.
Management (2)	8 hrs	Review and comment per area of expertise.
Legal	4 hrs	Review and comment per area of expertise.
Environmental Engineer	15 hrs	Disposition comments and finalize document.
Administrative Support	6 hrs	Copy & assemble final documents, submit to records.

Unit Cost Adjustment Factor: none
Revised Unit Hours: 138
Basis for adjustment. N/A

Resources		Cost Element	Skill	Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	60.00
Factors	60	hrs						Hours
	750	STRAIGHT TIME BASE	E110	QUALITY CONTROL ENGINEERS	R100S	RMRS Salaried	Linear	4.00
Factors	4	hrs						Hours
	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	6.00
Factors	6	hrs						Hours
	750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	K265S	ER Programs	Linear	4.00
Factors	4	hrs						Hours
	750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	4.00
Factors	4	hrs						Hours
	750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K109S	Env Sys. Stewardship & Compliance	Linear	4.00
Factors	4	hrs						Hours
	750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	K215S	Information Resource Mgt	Linear	25.00
Factors	25	hrs						Hours
	750	STRAIGHT TIME BASE	P160	TECHNICAL WRITERS AND EDITOR	R100S	RMRS Salaried	Linear	15.00
Factors	15	hrs						Hours
	750	STRAIGHT TIME BASE	P170	OTHER ADMINISTRATIVE & PROFE	K101S	General Counsel	Linear	4.00
Factors	4	hrs						Hours
	750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	K253S	Remediation, Industrial & Site Serv	Linear	4.00
Factors	4	hrs						Hours
	750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	8.00
Factors	8	hrs						Hours

WBS No: 1GAB0204
Activity ID: 1G90020070

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

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Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	587.50 Dollars
Factors		587.499 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	263.30 Dollars
Factors		263.3 Dollars					

WBS No:	1GAB0205	Title:	Group 900-12 (T5, 6, 8, 9, 10, 11)
Activity ID:	1G900C0100	Description:	Develop Regrad/Reveg Plan - IHSS Group 900-12

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
100	develop regrading and revegetating plan	1.00	each	EE	184	184	4,575	0	0	4,575	2,182	6,757
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	361	361	0	361
Total for Activity 1G900C0100:						184	4,575	0	361	4,936	2,182	7,118

Line Item 100 - develop regrading and revegetating plan

BOE

Estimators Experience - 10 years experience in similar projects.
Experience Item Desc - Develop Regrade/revegetation Plan. This document will be a very short, technical document which will describe the areas to be disturbed, soil stockpile areas, and reseeding. It will not require agency approval.
Breakdown of Cost Data: 80 hours for civil engineer to develop regrade revegetation approach and write this up. 20 hours for civil engineer to obtain Site approvals and incorporate comments. 20 hours Env. Engineer support. 20 hours GIS support 4 hours for compliance/Quality Assurance review. 20 hours for Secretarial support to distribute, edit and copy 20 hours for project management support
Basis for adjustment - none

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E020	CIVIL ENGINEERS	R100S	RMRS Salaried	Linear	100.00 Hours
Factors		100 hrs					
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	20.00 Hours
Factors		20 hrs					
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	20.00 Hours
Factors		20 hrs					
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	20.00 Hours
Factors		20 hrs					
750	STRAIGHT TIME BASE	P050	COMPLIANCE INSPECTORS	R100S	RMRS Salaried	Linear	4.00 Hours
Factors		4 hrs					
750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried	Linear	20.00 Hours
Factors		20 hrs GIS support					

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	219.25 Dollars
Factors		219.250 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	142.08 Dollars
Factors		142.076 Dollars					

Activity ID:	1G900C0110	Description:	Procurement/Field Prep - IHSS Group 900-12
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Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
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WBS No: 1GAB0205
Activity ID: 1G900C0110

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

0100	Procurement/HASP	1.00	each	EE	210	210	5,812	0	0	5,812	2,772	8,585
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	459	459	0	459
Total for Activity 1G900C0110:						210	5,812	0	459	6,271	2,772	9,044

Line Item 0100 - Procurement/HASP

BOE	Estimator's Experience: 10 years of experience planning, estimating and conducting projects of similar scope and size. (A Primrose)											
	Item Desc: The HASP will address expected physical conditions such as heat or cold stress. No contaminants are expected. The HASP will be generated by Site personnel and approved/amended by the subcontractor. The procurement will take minimal time and will be a modification to an existing Site subcontract. The staff will be previously trained.											
	Breakdown of Cost Data:											
	Item: Prepare HASP and obtain procurement. The estimate is based on other limited sampling projects such as that for IHSS 118.1.											
	Units: hours											
	Unit Cost:											
	40 hours for health and safety support of HASP, based on previous experience											
	40 hours project manager support for development of SOW, review of HASP											
	40 hours env engineer support for development of HASP and SOW											
	40 hours Secretarial support for document prep and distribution This is the total secretarial support for this project.											
	10 hours for QA document review and comment resolution											
	40 hours planning and scheduling support based on similar projects. These are the planning costs for the entire project											
	210 hours.											
	Unit Cost Adjustment Factor: none											

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
	Factors	40	hrs						
	750	STRAIGHT TIME BASE	E110	QUALITY CONTROL ENGINEERS	R100S	RMRS Salaried	Linear	10.00	Hours
	Factors	10	hrs						
	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	40.00	Hours
	Factors	40	hrs						
	750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	40.00	Hours
	Factors	40	hrs						
	750	STRAIGHT TIME BASE	P070	COST ESTIMATORS PLANNERS AN	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs							
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	40.00	Hours	
Factors	40	hrs							

Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	278.57	Dollars
	Factors 278.570 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	180.52	Dollars
	Factors 180.515 Dollars									

Activity ID: 1G900C0130 Description: Regrade/Revea - IHSS Group 900-12

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	regrade and revegetate	1.00	each	HC	88	88	2,662	37,307	0	39,969	1,270	41,238
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	2,205	2,205	0	2,205
Total for Activity 1G900C0130:						88	2,662	37,307	2,205	42,174	1,270	43,444

Line Item 0100 - regrade and revegetate

BOE	Historical Data Source - This estimate is from on the Trench 1 regrade revegetation costs from FY00. It is assumed that the area and level of effort will be the same for this project as for Trench 1. The vendor was Custom Services of Colorado. Supplier of dirt was Pioneer Sand Company, Inc.											
	Item Desc -											
	Breakdown of Historical Data:											

WBS No: 1GAB0205
Activity ID: 1G900C0130

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
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Item A5H Subcontracts	
1 month rental Port-o-let	\$70
1 month rental Hand-wash	\$50
1 week front Loader	\$3,175
1 week 140H grader with ripper	\$2,315
Mobilization charge	\$600
Topsoil \$10/ton * 2,373 tons	\$23,730
Seed mixture \$9.63 lb * 80 lbs	\$770.40
Mulch/Soil Guard \$1.20 lb * 6,600	\$7,920
Labor	\$3,480
 TOTAL	 \$42,110.40

Site Support	
A5H Site Ecology Group support	\$2,000
Full time Proj manager support	40 hours
Full time h&S support	40 hours
Compliance/QA inspectors	8 hours

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 hrs							
750	STRAIGHT TIME BASE	P050	COMPLIANCE INSPECTORS	R100S	RMRS Salaried	Linear	8.00	Hours
Factors	8 hrs							
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 hrs							
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	35.615.29	Dollars
Factors	42110.4 sub/c support							
A5H	SUBCONTRACTED SRVS	S020	ENVIRONMENTAL SCIENTISTS	K266S	Envir. Safetv. Health & Quality	Linear	1.691.52	Dollars
Factors	2000 \$	Develop seed mixture/supervise						
							0.84576	[SYS 061400] .84576000 - Svstem
							0.84576	[SYS 061400] .84576000 - Svstem

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1.338.18	Dollars
Factors	1338.18 Dollars							
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	867.15	Dollars
Factors	867.150 Dollars							

WBS No: 1GAB0301 Title: Group SW-1 (Ash Pits)

Activity ID: 1GCM940000 Description: Decision Document Prep - Group SW-1

Line Item		Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
1000	PAM		1.00	each	EE	740	740	22.244	0	0	22.244	7.696	29.940
SYS	Contingency And Escalation		1.00	ea	EE	0	0	0	0	8.384	8.384	0	8.384
Total for Activity 1GCM940000:							740	22.244	0	8.384	30.628	7.696	38.324

Line Item 1000 - PAM

BOE

Estimator's Experience based generally on historical data for Ryan's Pit

Item Desc:
Preparation of PAM in support of source removal of a previously characterized IHSS.

Breakdown of Cost Data:
Item: Preparation of PAM for Ryan's Pit source removal action modified to include GIS support.
Units: hours

WBS No: 1GAB0301
Activity ID: 1GCM940000

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Unit Cost:	40 hours GIS support, 72 hours project manager technical support, 628 hours for technical staff to write document.
Unit Cost Adjustment Factor:	None
Revised Unit Hours:	None
Basis for adjustment.	None

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	628.00	Hours
Factors	628 hrs					
	750 STRAIGHT TIME BASE	M040 MANAGERS (GRADE 64 - 68)	R100S RMRS Salaried	Linear	72.00	Hours
Factors	72 hrs					
	750 STRAIGHT TIME BASE	P060 COMPUTER SYSTEMS ANALYSTS	R100S RMRS Salaried	Linear	40.00	Hours
Factors	40 hrs					

Line Item SYS - Contingency And Escalation

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	6.087.89	Dollars
Factors	6087.89 Dollars					
	ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	2.295.96	Dollars
Factors	2295.96 Dollars					

Activity ID: 1GCM940007 Description: Decision Doc Revision - Group SW-1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
010	PAM revision	1.00	each	EE	120	120	3.205	0	0	3.205	1.109	4.314
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	1.208	1.208	0	1.208
Total for Activity 1GCM940007:						120	3.205	0	1.208	4.413	1.109	5.522

Line Item 010 - PAM revision

BOE	Based on previous projects, minimal changes to the PAM will be required and will take approximately one week to resolve. Two environmental engineers full time = 80 hours Secretarial support for reformatting, copying, and editing = 20 hours GIS support for redoing maps = 20 hours.
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Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	80.00	Hours
Factors	80 h					
	750 STRAIGHT TIME BASE	G010 ADMINISTRATIVE ASSISTANTS	R100S RMRS Salaried	Linear	20.00	Hours
Factors	20 h					
	750 STRAIGHT TIME BASE	P060 COMPUTER SYSTEMS ANALYSTS	R100S RMRS Salaried	Linear	20.00	Hours
Factors	20 h					

Line Item SYS - Contingency And Escalation

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	877.18	Dollars
Factors	877.179 Dollars					
	ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	330.81	Dollars
Factors	330.815 Dollars					

Activity ID: 1GCM940020 Description: Procurement and Field Prep - Group SW-1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	procurement & field prep	1.00	each	EE	369	369	10.177	4.229	0	14.406	3.521	17.927
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	4.970	4.970	0	4.970
Total for Activity 1GCM940020:						369	10.177	4.229	4.970	19.376	3.521	22.897

Line Item 0100 - procurement & field prep

BOE	Estimator's Experience based on other remedial action preparation.
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WBS No: 1GAB0301
Activity ID: 1GCM940020

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Item Desc:
Prepare Statement of Work, Conflict of Interest Documentation, Proposal Technical Evaluation, Contract Negotiations, Davis-Bacon Determination, Radiological Work Permit, Ecology Survey/NEPA Support, and Utility Clearance/Soil Disturbance Permit.

Breakdown of Cost Data:
Item: Site Labor to perform above individual tasks for based on similar projects
Units: hours
Unit Cost:
Unit Cost Adjustment Factor: na
Revised Unit:

Prepare procurement paperwork: statement of work, Davis Bacon, purchase req, etc. = 40 hours proj mgr, 80 hours env engr. 10 hrs secretary
Bid review and negotiation = Compliance 9 hrs, Secretary 20 hrs, Proj Mgr 60 hrs, env engr 60 hrs, QA 10 hrs, Rad Engr 10 hrs, Industrial Hygiene 10 hrs, Safety 10 hours, Compliance 10 hrs
Utility clearance 9 hrs KH Construction
NEPA support, Ecology review and survey = \$5,000 A5H
RWP = 40 hours RCT and foreman
80 hrs project planner

Totals =
M010 - Project Manager = 100 hrs
E050 - Environmental Engineer = 140 hrs
E120 - Safety Engineer 10 hrs
P080 - Rad Engineer = 10 hrs
P090 - Industrial Hygiene = 10 hrs
T060 - RCT = 40 hrs
G010 - Secretarial Support 30 hrs
E130 - Other Engineers (Plant Excavation Specialists)= 9 hrs
E110 - Quality Assurance 10 hrs
P050 - Compliance specialists 10 hrs

Item: Subcontractor costs to perform above individual tasks for either Ryan's Pit or T-3/T-4.
Units: 1 lot
Unit Cost: \$10K
Unit Cost Adjustment Factor:
Revised Unit:

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	140.00	Hours
Factors	140 hrs							
750	STRAIGHT TIME BASE	E110	QUALITY CONTROL ENGINEERS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	10 hrs							
750	STRAIGHT TIME BASE	E120	SAFETY ENGINEERS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	10 hrs							
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K260S	Site Operations	Linear	9.00	Hours
Factors	9 hrs - Diggers							
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	30.00	Hours
Factors	30 hrs							
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	100.00	Hours
Factors	100 hrs							
750	STRAIGHT TIME BASE	P050	COMPLIANCE INSPECTORS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	10 hrs							

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750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	10	hrs						
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	10	hrs						
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KG10H	Remediation Steelworkers	Linear	40.00	Hours
Factors	40	hrs - RCTs						
A5H	SUBCONTRACTED SRVS	0000	NONE	K266S	Envir. Safetv. Health & Quality	Linear	4,228.80	Dollars
Factors	5000	\$						

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	3,595.47	Dollars
	Factors 3595.47 Dollars								
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1,374.74	Dollars
	Factors 1374.74 Dollars								

Activity ID: 1GCM940035 Description: Field Document Prep - Group SW-1

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0010	Sampling and Analysis Plan	1.00	each	EE	340	340	10,389	0	0	10,389	3,595	13,983
0025	Health and Safetv Plan	1.00	each	HC	50	50	1,684	6,089	0	7,773	583	8,356
0050	Field Implementation Plan	1.00	each	HC	60	60	1,922	14,716	0	16,639	665	17,304
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	10,991	10,991	0	10,991
Total for Activity 1GCM940035:						450	13,995	20,806	10,991	45,792	4,842	50,634

Line Item 0010 - Sampling and Analysis Plan

BOE

The Sampling and Analysis Plan directs the collection of field data. The objective of the Sampling and Analysis Plan is to delineate the specific data needs, sampling and analysis requirements, data handling procedures, and associated Quality Assurance/Quality Control requirements for the remedial action for the ash pits. This task is expected to be completed by Site Personnel.

Estimators Experience - 10 years experience estimating similar tasks
Experience Item Desc - preparation of the sampling and analysis plan

Breakdown of Cost Data:

Item: Prepare SAP address DOE and regulatory agency comments.

Units: hours

Unit Cost: 340

Unit Cost Adjustment Factor: none

Revised Unit Hours: 340

E050 Environmental Engineer 2.5 Weeks for document development

M040 Project Management 10% oversight of project

P090 Industrial Hygienist 1 week for HASP development

P080 Health Physicist 1 week for ALARA review and RWP

G010 Administrative 40 hours Secretarial support for document prep and distribution

E110 Quality Control Engineers 40 hours for document review and comment resolution

P070 Project Controls 40 hours planning and scheduling support based on similar projects.

Total = 340 hours

Basis for adjustment: None

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	100.00	Hours
	Factors	100 hrs							
	750	STRAIGHT TIME BASE	E110	QUALITY CONTROL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
	Factors	40 hrs							

WBS No: 1GAB0301
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750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs						
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs						
750	STRAIGHT TIME BASE	P070	COST ESTIMATORS PLANNERS AN	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs						
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs						

Line Item 0025 - Health and Safety Plan

BOE	The subcontractor working on the pond sediment removal project must develop a Health and Safety Plan acceptable to the Site. This activity addresses the Health and Safety Plan for the remedial action for all of the ash pits. It was assumed that only one HASP would be sufficient to perform similar work for all the ash pits. This task will be performed by subcontract personnel with Site input. Historical Data Source - Successful subcontract bid for the East Trenches Plume project. Breakdown of Historical Data: Item - health and safety plan Units - 1 Unit Cost - \$7,200 (from successful bidder) Unit Cost Adjustment factor - none Revised Unit Cost - Basis for adjustment - 40 hours IH support and 10 hours rad engineer support are required based on previous experience with the East Trenches Plume Project. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	10	hrs							
	750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs							
	A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	6.089.47	Dollars
Factors	7200	d							

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Line Item 0050 - Field Implementation Plan

BOE	The Field Implementation Plan will delineate the placement of any soil stockpiles the limits of the remedial action and will identify the disposition process for any accumulated water. This activity will develop the Plan for the remedial action for all of the ash pits. Historical Data Source - Successful Bid for East Trenches Plume Project Item Desc - Field Implementation Plan Breakdown of Historical Data: Item - FIP Units - 1 Unit Cost - \$17,400 based on the subcontract bid. Unit Cost Adjustment factor - none Revised Unit Cost - Basis for adjustment - 40 hours environmental engineer and 20 hours of project management support for document reviews, issue resolution will be required based on the East Trenches Plume project. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
-----	---

Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE		E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
	Factors 40 h									

WBS No: 1GAB0301
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750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	20.00	Hours
Factors	20	hrs						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	14.716.22	Dollars
Factors	17400	d						

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Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	7.950.91	Dollars
	Factors 7950.91 Dollars								
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	3.040.05	Dollars
Factors 3040.05 Dollars									

Activity ID: 1GCM940040 Description: Readiness Assessment - Group SW-1

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	readiness assessment	1.00	each	EE	247	247	8.021	4.060	0	12.081	2.775	14.856
0200	training	1.00	each	EE	132	132	3.902	10.149	0	14.051	1.350	15.401
0300	pre-evolution meeting	1.00	each	EE	60	60	1.774	5.075	0	6.848	614	7.462
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	10.457	10.457	0	10.457
Total for Activity 1GCM940040:						439	13.697	19.283	10.457	43.438	4.739	48.177

Line Item 0100 - readiness assessment

BOE

One readiness Assessment will be performed for the ashpits' remediation project. Estimator's Experience based generally on historical data for T-3/T4 Remediation.

Item Desc:
Conduct Readiness Assessment in support of source removal action.

Breakdown of Cost Data:
Item: Based on Site Labor used to perform Readiness Assessment for T-3/T-4.
Units: hours
Unit Cost: 247
Unit Cost Adjustment Factor: none
Revised Unit: na

Item: Subcontractor costs to perform Readiness Assessment for T-3/T-4.
Units: 1 lot
Unit Cost: \$4.8K
Unit Cost Adjustment Factor: none
Revised Unit: na

Basis for adjustment. None

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	132.00	Hours
	Factors	132	hrs						
	750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	79.00	Hours
	Factors	79	hrs						
	750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	22.00	Hours
	Factors	22	hs						
	750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	14.00	Hours
	Factors	14	hrs						
	A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	4.059.65	Dollars
Factors	4800	sub/c support							

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Baseline Cost and Basis of Estimate

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Line Item 0200 - training

BOE	Estimator's Experience based generally on historical data for T-3/T4 Remediation.									
	Item Desc: Conduct perform Training in support of source removal action.									
	Breakdown of Cost Data:									
	Item: Site Labor to perform above individual tasks for T-3/T-4.									
	Units: hours									
	Unit Cost: 132 Hours									
	Unit Cost Adjustment Factor: none									
	Revised Unit: na									
	Item: Subcontractor costs to perform above individual tasks for T-3/T-4.									
	Units: 1 lot									
	Unit Cost: \$12K									
	Unit Cost Adjustment Factor: Subcontract labor force is expected to be Site Steelworkers. However, RCTs may be Bartlett techs which will be A5H.									
	Therefore, these costs were left as A5H dollars.									
	Revised Unit: na									
	Basis for adjustment.									
	This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.									

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	132.00Hours
Factors		132	hrs				
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	10.149.12Dollars
Factors		12000	sub/c support				

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Line Item 0300 - pre-evolution meeting

BOE	Estimator's Experience based generally on historical data for T-3/T4 Remediation.		
	Item Desc: Conduct Pre-Evolution Meeting in support of source removal action		
	Breakdown of Cost Data:		
	Item: Site Labor to perform above individual tasks for T-3/T-4.		
	Units:	hours	
	Unit Cost:	60 hours	
	Unit Cost Adjustment Factor:	none	
	Revised Unit:	na	
	Item: Subcontractor costs to perform above individual tasks for T-3/T-4.		
	Units:	1 lot	
Unit Cost:	\$6K		
Unit Cost Adjustment Factor:	none		
Revised Unit:	na		
Basis for adjustment.			
This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.			

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	60.00Hours
Factors		60	hrs				
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	5.074.56Dollars
Factors		6000	sub/c support				

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WBS No: 1GAB0301
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Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	7.565.00	Dollars
Factors 7565 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	2.892.50	Dollars
Factors 2892.5 Dollars								

Activity ID: 1GCM940050 Description: Remedial Action - Group SW-1

Cost Risk 2 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	mobilization	1.00	each	HC	260	260	7.461	38.905	0	46.366	2.344	48.710
0200	site prep	1.00	each	HC	140	140	4.316	8.458	0	12.773	1.356	14.129
0300	excavation	1.00	ea	HC	38.001	38.001	1.007.436	405.978	0	1.413.414	316.538	1.729.951
0600	sampling	1.00	each	VQ	0	0	0	149.791	0	149.791	0	149.791
0700	prepare waste acceptance forms	1.00	each	EE	80	80	2.365	0	0	2.365	743	3.108
0900	field oversight & project mngt	1.00	each	EE	2.464	2.464	73.667	4.229	0	77.896	23.146	101.042
1000	backfill	1.00	each	TP	0	0	0	135.326	0	135.326	0	135.326
1100	regrade and revegetate	1.00	each	HC	88	88	2.662	37.307	0	39.969	836	40.805
1200	demobilization	1.00	each	HC	230	230	7.032	40.174	0	47.205	2.209	49.415
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	482.039	482.039	0	482.039
Total for Activity 1GCM940050:						41.263	1.104.938	820.166	482.039	2.407.143	347.173	2.754.316

Line Item 0100 - mobilization

BOE

Estimator's Experience based generally on historical data for T-3/T4 Remediation.

Item Desc: Mobilization in support of remediation.

Breakdown of Cost Data:
Item: Site Labor to perform above individual tasks for T-3/T-4.
It was estimated that mobilization would take 1 week. Two environmental engineer or similar people would take 50 hours each for these tasks, 40 hours plus 10 hours overtime. In addition it was estimated that an industrial hygienist and a radiological engineer would spend 20 hours each. Project management is full time, 40 hours, RCT support for baseline surveys is 80 hours (2 RCTs) Mobilization will include the baseline surveys for the equipment and trailer installation.
Units: hours
Unit Cost: 260
Unit Cost Adjustment Factor: none
Revised Unit: 260

Hours were assumed to be divided as follows:

Item: Subcontractor costs to perform above individual tasks for T-3/T-4. The subcontractor mobilization costs are based on the burdened costs for the T-3/T-4 project and consists mainly of setting up the thermal desorption treatment system. Because this project will not use thermal desorption, the costs were reduced to 25%. No further reduction was taken because contractor-supplied heavy equipment will be required for this project along with field trailer installation.
Units: 1 lot
Unit Cost: 184k
Unit Cost Adjustment Factor: 0.25
Revised Unit: \$46,000

Basis for adjustment. 25% of the T3/T4 costs were used based on no thermal desorption for the ash pits, but more heavy equipment and field trailers.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors 80 hrs								

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750	STRAIGHT TIME BASE	E120	SAFETY ENGINEERS	R100S	RMRS Salaried	Linear	20.00	Hours
Factors	20	Hours						
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	20.00	Hours
Factors	20	hrs						
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLOGI	KG10H	Remediation Steelworkers	Linear	80.00	Hours
Factors	80	hrs						
751	OVERTIME BASE & PRE.	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	20.00	Hours
Factors	20	overtime hrs						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	38,904.96	Dollars
Factors	46000	sub/c support						

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Line Item 0200 - site prep

BOE	Estimator's Experience based generally on historical data for T-3/T4 Remediation.
	Item Desc: Site Preparation including setting up fencing, trailer, etc. Based on T3/T4, it was assumed that average project site preparation costs were about \$30,000 subcontract costs and would take 3 weeks. These subcontract costs were reduced by 2/3 because this project will not require thermal desorption. The time was reduced by 2/3 because the area is isolated and will require fewer project controls. No RCT support will be required because there are no intrusive activities.
	Breakdown of Historical Data: Item: Site Labor to perform site preparation activities. Units: One week for two Env Engineers 40 hrs + 10 hrs overtime each One week for an Industrial Hygienist/Safety Engineer Unit Cost: 120 hrs + 20 hrs overtime Unit Cost Adjustment Factor: na Revised Unit: na
	Item: Subcontractor costs. Units: Site prep costs Unit Cost: \$10,000 Unit Cost Adjustment Factor: This is 1/3 the cost of the T3/T4 project Revised Unit:
	Basis for adjustment. Subcontract costs were reduced by 2/3 because this project will not require thermal desorption, the area is isolated and will require fewer project controls.
	This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	hrs							
750	STRAIGHT TIME BASE		P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs							
751	OVERTIME BASE & PRE.		E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	20.00	Hours
Factors	20	Hours							
A5H	SUBCONTRACTED SRVS		0000	NONE	K265S	ER Programs	Linear	8.457.60	Dollars
Factors	10000	sub/c support							

0.84576 [SYS 061400] .84576000 - System

Line Item 0300 - excavation

BOE	Estimator's Experience based generally on historical data for T-3/T4 Remediation.
	Item Desc: Excavation. Avg Ash Pit Length 200 feet Avg Ash Pit Width 12 feet

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Activity ID: 1GCM940050

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Avg Ash Pit Depth 10 feet
Volume per Ash Pit =24,000 CF
1:1 Cutback 24,000 CF
Per Pit 48,000 CF
of Pits 6
Total Volume = 288,000 CF
Total Volume = 10,667 yards

The T3/T4 project took 6 months to excavate 3,800 cubic yards, a rate of 633 cubic yards per month. However, this project was more complex than the ash pits are assumed to be because of the presence of debris, drums and volatile organics. This increased the task duration because of the requirement to sort debris, handle materials for treatment, and perform additional monitoring. For the ash pit remedial action, it is assumed that there will be a 2.5 improvement in this rate due to the homogeneity of the material, the ease of determining the difference between undisturbed soil and ash, the lack of handling for treatment and the absence of free product and liquid. The rate used for this project will be 1,600 cubic yards per month. Total duration will be 7 months or 140 working days. A work day of 12 hours will be required.

Breakdown of Historical Data:

Item: Site Labor to perform above individual tasks for T-3/T-4. The hours for an environmental engineer from T-3/T-4 were 1.09 hours per cubic yard of contaminated soil. Likewise the hours for the following were assumed to be linearly proportional:

Environmental Engineer	1.09 hours per cubic yard
Health Physicists	0.47 hours per cubic yard
Industrial Hygienists	0.31 hours per cubic yard
Radiological Control Technician	1.00 hour per cubic yard

For the estimated 10,667 cubic yards for this project, this would require:

Environmental Engineer 11,627 hours = about 10. However no more than 5 can be effectively utilized. This equals 5,600 regular work hours, 4 hours overtime * 5 * 140 = 2,800 overtime (751)

Health Physicists 5,014 hours

Industrial Hygienists 3,307 hours

RCTs 10,667 hours, or about 10 RCTs. This was reduced to 5 based on the nature of the project and the lack of treatment. 5 RCTs for 140 days * 8 hrs = 5,600 hours. Overtime = 4hrs/day * 140 days * 5 RCTs = 2,800 hours.

Steelworkers will perform the remedial action. Based on 15 hours RCT time for 19 hours steelworker time as was estimated from T-1 costs, the estimated number of steelworkers is (5600/15)*19 = 7093 hrs = 6.3 steelworkers. Rounding to 7 steelworkers, this will equate to 7 * 140 days * 8 hrs/day = 7,840 regular hours and 7 * 140 days * 4 hours = 3,920 overtime hours.

Project managers will be required full time for 140 days = 8*140 = 1,120 hours

Item: The subcontract excavation cost was based on the excavation cost for the T-3/T-4 Project. The excavation costs for T-3/T-4 actuals were \$171,487 for excavation of 3,800 cubic yards of contaminated soil, for a unit cost of \$45 per cubic yard of contaminated soil removed. This estimate includes the removal of overburden that might be on top of the contaminated soil.

Units: 10,667 cubic yards
Unit Cost: \$45/cubic yard
Unit Cost Adjustment Factor: none
Revised Unit: Total subcontract costs = 10,667 * \$45/cy = \$480,015

Basis for adjustment. Using the provided guidance, approximately 19% of the subcontract costs were for the steelworkers. Based on this

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	5.600.00	Hours
Factors 5600 hrs								
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	1.120.00	Hours
Factors 1120 hrs								
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	5.014.00	Hours
Factors 5014 hrs								
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	3.307.00	Hours
Factors 3307 hrs								
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLOGI	KG10H	Remediation Steelworkers	Linear	5.600.00	Hours
Factors 5600 hrs								

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750	STRAIGHT TIME BASE	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	3,920.00	Hours
Factors	3920 hrs							
750	STRAIGHT TIME BASE	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	7,840.00	Hours
Factors	7840 hrs							
751	OVERTIME BASE & PRE.	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	2,800.00	Hours
Factors	2800 overtime hours							
751	OVERTIME BASE & PRE.	T050	RADIATION CONTROL TECHNOLOGI	KG10H	Remediation Steelworkers	Linear	2,800.00	Hours
Factors	2800 Hours							
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	405,977.50	Dollars
Factors	480015 \$							

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Line Item 0600 - sampling

BOE

Estimator's Experience based generally on historical data for T-3/T4 Remediation.

Item Desc: Sampling costs are based on the samples collected for T3/T4. However, unlike Trenchs T3/T4, a more homogenous waste was disposed in the ash pits. Contamination is expected to be more consistent, the underlying soils are not expected to be contaminated, and so 40 total samples will be collected for each of the 6 ash pits. These samples will be used both for waste characterization and for confirmation samples and also include the QA/QC samples for this project. These will only be analyzed for the following analytes:
240 rad screens to determine the appropriate sample shipment offsite to analytical labs
240 isotopic uranium analysis
240 metals for waste disposal uses.

Vendor Name - KH ASD

Vendor Quote - costs provided during baseline development

Quote Received by - A. Primrose

Date Received - 4/28/00

Item being quoted - sample costs

720 sample bottles at \$7 each = \$5,040

Shipping at \$42 for 10 bottles. There will be 72 groups of 10 bottles times \$42 = \$3,024

240 rad screens at \$32 each = \$7,680

240 isotopics at \$295 (\$590 reduced by 50% for only uranium) each = \$70,800

240 metals at \$345 each = \$82,800

Data validation will be done for 3 sets of 20 samples each

12 metals Data validation cost for > 11 samples at \$335 each = \$4,020

12 rad data validation costs for >11 samples at \$312 each = \$3,744

Total Cost \$177,108

Availability - yes

Note: The cost of collecting the samples are assumed to be included in the excavation costs.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K267S	Analvtical Laboratory Services	Linear	149,790.90	Dollars
Factors	177108 dollars							

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item 0700 - prepare waste acceptance forms

BOE

Estimator's Experience based generally on historical data for T-3/T4 Remediation.

Item Desc: Preparation of Waste Acceptance Forms: Based on t3/T4, it was estimated that each project would take two weeks of environmental engineering time (80 hours) to prepare these forms. No overtime will be required.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80 hrs							

Line Item 0900 - field oversight & project mgmt

BOE

Estimator's Experience based generally on historical data for T-3/T4 Remediation.

Item Desc: Field Oversight and Project Management

WBS No: 1GAB0301
Activity ID: 1GCM940050

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Project Baseline Devl
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Starts In FY *

Breakdown of Historical Data:
Item: Site Labor
Units: hours
Unit Cost: 140 days with one fulltime project manager = 140*8 = 1,120 hrs
Planner = 1/2 FTE for project planning support, budget and scope tracking
Secretary = 1/2 FTE, required for transmitting records, credit card purchase
Quality Assurance = 1/10 FTE = 112 hours
Compliance Support = 1/10 FTE = 112 hours

Unit Cost Adjustment Factor: none
Revised Unit: none

Item: Subcontractor costs to provide Ecology Support
Units: \$
Unit Cost: Ecology support generally costs approximately \$5,000 per project
Unit Cost Adjustment Factor: na
Revised Unit: na

Basis for adjustment.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E110	QUALITY CONTROL ENGINEERS	R100S	RMRS Salaried	Linear	112.00	Hours
Factors 112 hrs								
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	560.00	Hours
Factors 560 hrs								
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	1,120.00	Hours
Factors 1120 hrs								
750	STRAIGHT TIME BASE	P050	COMPLIANCE INSPECTORS	R100S	RMRS Salaried	Linear	112.00	Hours
Factors 112 hrs								
750	STRAIGHT TIME BASE	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	560.00	Hours
Factors 560 hrs								
A5H	SUBCONTRACTED SRVS	S020	ENVIRONMENTAL SCIENTISTS	K266S	Envir. Safetv. Health & Quality	Linear	4,228.80	Dollars
Factors 5000 \$								

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item 1000 - backfill

BOE

Trade Publication Means 1995, Site Work & Landscape Cost Data (page 34, 42, and 34)

Item Desc: Backfill.

Breakdown of Historical Data:

Item: Site Labor to perform above individual tasks for T-3/T-4.

Units: hours

Unit Cost: Backfill will take place concurrent with excavation. No additional Site labor will be utilized.

Unit Cost Adjustment Factor: none

Revised Unit: none

Item: Subcontractor costs to perform above individual tasks for T-3/T-4. Backfill costs were taken form Means (1995) Site Work & Landscape Cost Data as follows:

Cost Reference

Common Fill \$ 4.77/cubic yard (page 34 Borrow Bank Measure)

Hauling \$ 3.98/cubic yard (page 42 2-mile round-trip, 6 cubic yard dump truck)

Backfilling \$ 1.69/cubic yard (page 34)

Burden (43%)\$ 4.49/cubic yard

Total \$14.23/cubic yard or about \$15/cubic yard

With 10,667 cubic yards of backfill required, this equals \$160,005

WBS No: 1GAB0301
Activity ID: 1GCM940050

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Starts In FY *

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	135.325.80	Dollars

Factors 160005 Dollars

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Line Item 1100 - regrade and revegetate

BOE

Historical Data Source - This estimate is from on the Trench 1 regrade revegetation costs from FY00. It is assumed that the area and level of effort will be the same for this project as for Trench 1. The vendor was Custom Services of Colorado. Supplier of dirt was Pioneer Sand Company, Inc.

Item Desc -

Breakdown of Historical Data:

Item A5H Subcontracts

1 month rental Port-o-let\$70

1 month rental Hand-wash\$50

1 week front Loader\$3,175

1 week 140H grader with ripper\$2,315

Mobilization charge\$600

Topsoil \$10/ton * 2,373 tons\$23,730

Seed mixture \$9.63 lb * 80 lbs\$770.40

Mulch/Soil Guard \$1.20 lb * 6,600\$7,920

Labor\$3,480

TOTAL\$42,110.40

Site Support

A5H Site Ecology Group support\$2,000

Full time Proj manager support40 hours

Full time h&S support40 hours

Compliance/QA inspectors8 hours

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	40.00	Hours

Factors 40 hrs

750	STRAIGHT TIME BASE	P050	COMPLIANCE INSPECTORS	R100S	RMRS Salaried	Linear	8.00	Hours
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Factors 8 hrs

750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	40.00	Hours
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Factors 40 hrs

A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	35.615.29	Dollars
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Factors 42110.4 sub/c support

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A5H	SUBCONTRACTED SRVS	S020	ENVIRONMENTAL SCIENTISTS	K266S	Envir. Safetv. Health & Quality	Linear	1.691.52	Dollars
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Factors 2000 \$ Develop seed mixture/supervise

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item 1200 - demobilization

BOE	Estimator's Experience based generally on historical data for T-3/T4 Remediation.								
	Item Desc: Demobilization. Breakdown of Historical Data: The subcontractor cost for demobilization was about \$95,000 for 3,800 cubic yards at the T-3/T-4 project. In addition it was estimated that the following hours were necessary: Environmental Engineer 300 hours Health Physicist 100 hours Environmental Operations 200 hours Industrial Hygiene 100 hours However, the thermal desorption treatment unit was also demobilized at the same time. Removal of equipment and materials from the ash pit job site is								

WBS No: 1GAB0301
Activity ID: 1GCM940050

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expected to require only 1/3 of the resources as no treatment unit will be demobilized. Revised costs are as follows:

Subcontract costs (A5H) = 47,500

Environmental Engineer 170 hours
Health physicist 30 hours
Industrial Hygiene 30 hours

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	170.00	Hours
	Factors 170 hrs								
	750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	30.00	Hours
	Factors 30 hrs								
	750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	30.00	Hours
	Factors 30 hrs								
	A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	40.173.60	Dollars
	Factors 47500 sub/c support								

0.84576 [SYS 061400] .84576000 - System

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	286.306.10	Dollars
	Factors 286306 Dollars								
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	195.733.00	Dollars
	Factors 195733 Dollars								

Activity ID: 1GCM940060 Description: Prepare Closeout Report - Group SW-1

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	develop report	1.00	each	EE	328	328	8,980	710	0	9,691	2,532	12,223
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	1,745	1,745	0	1,745
Total for Activity 1GCM940060:						328	8,980	710	1,745	11,436	2,532	13,969

Line Item 0100 - develop report

BOE

Estimator's Experience on similar projects

Item Desc:

Closeout report is required to document the remedial action including GIS representation of data. The report will take 2 weeks to develop, although reviews and minor revisions will take much longer.

Breakdown of Cost Data:

Item: Develop Documentation

Units: hours

Unit Cost:

Environmental Engineer full time 2 weeks 80 hrs

Project Manager full time 2 weeks 80 hrs

Secretary full time 2 weeks 80 hrs

GIS map technician 80 hrs

QA oversight 8 hrs

cost estimator 20 hrs

Unit Cost Adjustment Factor: none

Revised Unit Hours: 348

Basis for adjustment.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
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WBS No: 1GAB0301
Activity ID: 1GCM940060

Rockv Flats Closure Project
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Project Baseline Devl
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750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	hrs						
750	STRAIGHT TIME BASE	E110	QUALITY CONTROL ENGINEERS	R100S	RMRS Salaried	Linear	8.00	Hours
Factors	8	hrs						
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	hrs						
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	hrs						
750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	hrs						
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	710.44	Dollars
Factors	20	hrs	42	estimated \$/hr				

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Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	571.70	Dollars
	Factors 571.702 Dollars								
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1.173.65	Dollars
	Factors 1173.65 Dollars								

Activity ID: 1GCM940080 Description: Project Management - Group SW-1

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
010	Project management	1.00	each	EE	2.703	2.703	88.209	16.091	0	104.301	28.470	132.771
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	29.487	29.487	0	29.487
Total for Activity 1GCM940080:						2.703	88.209	16.091	29.487	133.788	28.470	162.258

Line Item 010 - Project management

BOE

Project management will be a year long function and will support the other tasks. Items included in this task include presentations to management, regulatory agencies and the public, development of briefing materials, cost and schedule control, regular reporting of progress along with cost schedule and or other issues, and project oversight. Hours are based on what is required to run projects such as T-1, T3/T4 and Mound remedial actions. Included are:

Full time project manager
1/4 FTE secretary
1/4 FTE budget control specialist
1/8 FTE QA support
1/8 FTE compliance support

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E110	QUALITY CONTROL ENGINEERS	R100S	RMRS Salaried	Linear	220.00	Hours
	Factors	220 hrs							
	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	453.00	Hours
	Factors	453 hours							
	750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	1.810.00	Hours
	Factors	1810 Hours							
	750	STRAIGHT TIME BASE	P050	COMPLIANCE INSPECTORS	R100S	RMRS Salaried	Linear	220.00	Hours
	Factors	220 hrs							
	A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	16.091.43	Dollars
Factors	453 hrs		42 estimated \$/hr						

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
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WBS No: 1GAB0301
Activity ID: 1GCM940080

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	18,399.13	Dollars
Factors 18399.1 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	11,088.34	Dollars
Factors 11088.3 Dollars								

WBS No: 1GAB0401 Title: Group 900-11 (903 Pad)

Activity ID: 1GEFR11110 Description: South East Area Project Scoping

Cost Risk 3 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Scoping Activity	2.00	wk	EE	80	160	4,946	4,939	0	9,886	2,359	12,245
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	661	661	0	661
Total for Activity 1GEFR11110:						160	4,946	4,939	661	10,546	2,359	12,906

Line Item 10 - Scoping Activity

BOE

Estimator's Experience - Estimator has 6 years experience scoping similar projects.
Experience Item Desc - 903 Drum Storage, 903 Lip Area, and Americium Zone Sampling and Analysis Plan
Breakdown of Cost Data:
Item - Labor hours, subcontractor dollars
Units - labor hours per week, subcontract dollars per week
Unit Cost - 80 labor hours, \$2,920 Subcontract dollars (2 week activity duration)
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This BOE assumes one environmental scientist and one environmental engineer are required per week for the duration of the scoping activity (2 weeks).

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	40.00	Hours
Factors 40 Hours 1 Environmental Engineer					
750 STRAIGHT TIME BASE	S020 ENVIRONMENTAL SCIENTISTS	R100S RMRS Salaried	Linear	40.00	Hours
Factors 40 Hours 1 Environmental Scientist					
A5H SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	2,469.62	Dollars
Factors 73 Dollars 1 Subcontract Engineer 40 hours per week					

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Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	403.36	Dollars
Factors 403.363 Dollars					
ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	257.49	Dollars
Factors 257.487 Dollars					

Activity ID: 1GEFR11120 Description: Prepare IHSS 140 SAP

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Prepare SAP	1.00	each	EE	136	136	3,804	9,878	0	13,683	1,815	15,497
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	829	829	0	829
Total for Activity 1GEFR11120:						136	3,804	9,878	829	14,511	1,815	16,326

Line Item 10 - Prepare SAP

BOE

Estimator's Experience - Estimator has 6 years experience preparing similar documents
Experience Item Desc - 903 Drum Storage, 903 Lip Area, and Americium Zone Sampling and Analysis Plan
Breakdown of Cost Data:
Item - Labor hours, subcontractor costs
Units - Lot
Unit Cost - 176 labor hours, \$11,680 subcontract dollars
Unit Cost Adjustment factor -
Revised Unit Cost -

WBS No: 1GAB0401
Activity ID: 1GEFR11120

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Basis for adjustment -

This BOE assumes an environmental engineer at 1/4 time per month, and one computer system analysts is required 1/2 time per month. It also assumes that a QC engineer is required 16 hours per month to support the contractor prepared SAP.

This BOE includes one subcontract FTE 160 hours per month to prepare the SAP. This activity has a duration of one month

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element			Skill		Department		Curve	Quantity	Units		
	750	STRAIGHT TIME BASE		E050	ENVIRONMENTAL ENGINEERS		R100S	RMRS Salaried		Linear	40.00	Hours
	Factors	160	Hours	0.25		month						
	750	STRAIGHT TIME BASE		E110	QUALITY CONTROL ENGINEERS		R100S	RMRS Salaried		Linear	16.00	Hours
	Factors	160	hours	0.1		month						
	750	STRAIGHT TIME BASE		P060	COMPUTER SYSTEMS ANALYSTS		R100S	RMRS Salaried		Linear	80.00	Hours
	Factors	160	Hours	0.5		month						
	A5H	SUBCONTRACTED SRVS		0000	NONE		K265S	ER Programs		Linear	9.878.48	Dollars
	Factors	73	Dollars	1		engineer		160		hours per month		

0.84576 [SYS 061400] .84576000 - Ssystem

Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	502.88	Dollars
	Factors 502.884 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	325.87	Dollars
	Factors 325.872 Dollars									

Activity ID: 1GEFR11135 Description: Incorporate Agency Comments-IHSS 140 SAP

Cost Risk 3 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Resolve Comments/Revise SAP	1.00	each	EE	80	80	2.198	4.939	0	7.138	1.049	8.186
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	442	442	0	442
Total for Activity 1GEFR11135:						80	2.198	4.939	442	7.579	1.049	8.628

Line Item 10 - Resolve Comments/Revise SAP

BOE

Estimator's Experience - Estimator has 6 years experience preparing similar documents

Experience Item Desc - 903 Drum Storage, 903 Lip Area, and Americium Zone Sampling and Analysis Plan

Breakdown of Cost Data:

Item - Labor hours, subcontractor costs

Units - Lot

Unit Cost - 80 labor hours, \$5,840 subcontract dollars

Unit Cost Adjustment factor -

Revised Unit Cost -

Basis for adjustment -

This BOE includes hours for a computer systems analysts, and a environmental engineer half time for two weeks to incorporate comments from the agency review period. Also provides a subcontract engineer 80 hours over this duration.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

BOE

Estimator's Experience - Estimator has 6 years experience preparing similar documents

Experience Item Desc - 903 Drum Storage, 903 Lip Area, and Americium Zone Sampling and Analysis Plan

Breakdown of Cost Data:

Item - Labor hours, subcontractor costs

Units - Lot

Unit Cost - 80 labor hours, \$5,840 subcontract dollars

Unit Cost Adjustment factor -

Revised Unit Cost -

Basis for adjustment -

This BOE includes hours for a computer systems analysts, and a environmental engineer half time for two weeks to incorporate comments from the agency review period. Also provides a subcontract engineer 80 hours over this duration.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

WBS No: 1GAB0401
Activity ID: 1GEFR11135

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	269.66 Dollars
Factors		269.663 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	172.14 Dollars
Factors		172.139 Dollars					

Activity ID: 1GEFR11140 Description: Procure IHSS 140 Characterization Subcontract

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Procurement MTS Contractor	1.00	each	EE	80	80	2,317	0	0	2,317	1.105	3,422
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	181	181	0	181
Total for Activity 1GEFR11140:						80	2,317	0	181	2,498	1.105	3,603

Line Item 10 - Procurement MTS Contractor

BOE

Estimators Experience - Estimator has requisitioned MTS subcontract support
Experience Item Desc - 903 Pad Characterization Report
Breakdown of Cost Data:
Item - labor hours
Units - week
Unit Cost - 80 labor hours
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This BOE provides procurement buyer and environmental engineer 40 hours per week to contact characterization subcontractor. The duration of this activity is two weeks.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	K265S	ER Programs	Linear	40.00 Hours
Factors		40 hours					
750	STRAIGHT TIME BASE	P030	BUYERS PROCUREMENT AND CON	K265S	ER Programs	Linear	40.00 Hours
Factors		40 Hours					

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	109.46 Dollars
Factors		109.46 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	71.96 Dollars
Factors		71.9552 Dollars					

Activity ID: 1GEFR11160 Description: IHSS 140 Field Characterization

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Site Labor	4.00	wk	EE	200	800	20,050	0	0	20,050	9,564	29,614
20	Subcontractor Costs	1.00	each	EE	0	0	0	54,146	0	54,146	0	54,146
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	4,479	4,479	0	4,479
Total for Activity 1GEFR11160:						800	20,050	54,146	4,479	78,675	9,564	88,239

Line Item 10 - Site Labor

BOE

Estimators Experience - Estimator has 6 years experience implementing SAPs
Experience Item Desc - Implemented characterization SAP for the 903 Pad
Breakdown of Cost Data:
Item - labor hours
Units - hours per week
Unit Cost - 200 hours (4 week activity duration)
Unit Cost Adjustment factor -
Revised Unit Cost -

WBS No: 1GAB0401
Activity ID: 1GEFR11160

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Basis for adjustment -

This BOE provides an environmental engineer working full time and a health physicist, nuclear engineer, RCT foreman, and geologist at one-quarter time for the duration of the project. This activity is baselined for four weeks.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours	1	Environmental Engineer				
750	STRAIGHT TIME BASE	E080	NUCLEAR (CRITICALITY) ENGINEER	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	40	Hours	0.25	Rad Safety ALARA Job Review				
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	K265S	ER Programs	Linear	10.00	Hours
Factors	40	Hours	0.25	RCT Foreman				
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	40	Hours	0.25	IH				
750	STRAIGHT TIME BASE	S030	GEOLOGISTS	K100S	Kaiser-Hill	Linear	10.00	Hours
Factors	40	Hours	0.25	Geologist - Survey Boreholes				
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLOGI	KG10H	Remediation Steelworkers	Linear	120.00	Hours
Factors	40	Hours	3	RCT				

Line Item 20 - Subcontractor Costs

BOE

Estimators Experience - Estimator has 6 years experience implementing SAPs
Experience Item Desc - Implemented characterization SAP for the 903 Pad
Breakdown of Cost Data:
Item - subcontract dollars
Units - dollar per month
Unit Cost - \$63,400 dollars
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This BOE provides two Subcontract FTEs two months one in field and one to prepare for field effort including training, Readiness Assessment, procurement of supplies and coordination of sampling and site resources.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	3.400.00	Dollars
Factors	17	Dollars	5	Men PPE	2	Pairs per day	20	days per month
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	50.745.60	Dollars
Factors	30000	Dollars	2	2 FTEs 2 months and \$5K of ODCs				

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Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	2.717.99	Dollars
Factors	2717.99	Dollars						
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1.761.27	Dollars
Factors	1761.27	Dollars						

Activity ID: 1GEFR11170

Description: IHSS 140 Lab Analysis

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Analytical Laboratory	1.00	each	VQ	0	0	0	179.301	0	179.301	0	179.301
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	9.506	9.506	0	9.506
Total for Activity 1GEFR11170:						0	0	179.301	9.506	188.807	0	188.807

Line Item 10 - Analytical Laboratory

BOE

Vendor Name - K-H Analytical Services Division
Vendor Quote - \$212,000

WBS No: 1GAB0401
Activity ID: 1GEFR11170

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Quote Received by - Prepared by S. Paris based on spreadsheet identified below.
Date Received -
Item being quoted - 120 rad iso analysis, 120 metals analysis, 120 VOC analysis
Other Info - Spreadsheet "analytical costs" provided by K-H ER Projects group in ER Share folder for this baselining effort
Availability -

Assumes 25 borehole completed to 2 ft in depth with samples collected over 6 inch intervals for a total of 4 samples per borehole. 100 samples collected with 20% QA samples equals 120 samples collected.

Analysis	# of Samples	Cost per Sample	Validation Cost	Total Cost
Volatile Organics	120	\$361.00	\$10,380.00	\$53,700.00
Inorganics - metals	120	\$426.00	\$10,050.00	\$61,170.00
Isotopics (Pu, Am, & U)	120	\$671.00	\$9,360.00	\$89,880.00
Sampling - Rad (base cost per day)5 days of sampling			\$1500.00	\$7,500.00
TOTAL				\$212,250.00

Analysis costs include analysis with routine turnaround time, DOT screen, sample bottle, shipping costs, and Verification and Validation costs (25% validation)

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
A5H		SUBCONTRACTED SRVS	0000	NONE	K267S	Analytical Laboratory Services	Linear	179.301.10	Dollars
Factors		212000 Dollars	Analytical Work		0.84576 [SYS 061400] .84576000 - Svstem				

Line Item SYS - Contingency And Escalation

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
CON		CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	5.735.47	Dollars
Factors		5735.47 Dollars							
ESC		ESCALATION	0000	NONE	ZDEPT	No Department	Linear	3.770.30	Dollars
Factors		3770.30 Dollars							

Activity ID: 1GEFR11180 Description: IHSS 140 Characterization Report

Cost Risk 3 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Site Labor	2.00	wk	EE	40	80	2.365	0	0	2.365	1.128	3.493
20	Subcontractor Costs	1.00	each	EE	0	0	0	25.373	0	25.373	0	25.373
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	1.558	1.558	0	1.558
Total for Activity 1GEFR11180:						80	2.365	25.373	1.558	29.295	1.128	30.423

Line Item 10 - Site Labor

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
750		STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors		40 Hours	1 Environmental Engineer						

Line Item 20 - Subcontractor Costs

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
750		STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors		40 Hours	1 Environmental Engineer						

WBS No: 1GAB0401
Activity ID: 1GEFR11180

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Item - subcontract dollars
Units - lot
Unit Cost - \$30,000 dollars
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This BOE provides two FTEs (Engineers) full-time @\$73 per hour for one month to prepare report. \$5,000 for ODCs, copying, binders etc.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS		0000	NONE	K265S	ER Programs	Linear	25.372.80	Dollars
Factors		30000 Dollars	2 FTEs and \$5K of ODCs (arabics)		0.84576 [SYS 061400] .84576000 - Svsstem				

Line Item SYS - Contingency And Escalation

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	950.86	Dollars
Factors		950.858 Dollars							
ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	606.98	Dollars
Factors		606.979 Dollars							

Activity ID: 1GGE161140 Description: Analysis of Remedial Alternatives

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Analysis of Remedial Alternatives	1.00	each	EE	260	260	5.571	21.567	0	27.138	1.967	29.105
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	4.395	4.395	0	4.395
Total for Activity 1GGE161140:						260	5.571	21.567	4.395	31.533	1.967	33.500

Line Item 10 - Analysis of Remedial Alternatives

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE		G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	180.00	Hours
Factors		180 hours							
750	STRAIGHT TIME BASE		S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors		80 Hours							
A5H	SUBCONTRACTED SRVS		0000	NONE	K265S	ER Programs	Linear	21.566.88	Dollars
Factors		25500 Dollars							

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Line Item SYS - Contingency And Escalation

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	3.034.82	Dollars
Factors		3034.82 Dollars							
ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	1.360.12	Dollars
Factors		1360.12 Dollars							

Activity ID: 1GGE161170	<i>Description:</i> Prepare Closeout Report - IHSS Group 900-11
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Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	develop report	1.00	each	EE	320	320	9.045	0	0	9.045	3.148	12.192
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	6.657	6.657	0	6.657
Total for Activity 1GGE161170:						320	9.045	0	6.657	15.702	3.148	18.849

Line Item 0100 - develop report

BOE

Estimator's Experience on similar projects

Item	Desc:	QTY	UNIT	PRICE	TOTAL
1	1000	1	EA	1000	1000
2	2000	1	EA	2000	2000
3	3000	1	EA	3000	3000
4	4000	1	EA	4000	4000
5	5000	1	EA	5000	5000
6	6000	1	EA	6000	6000
7	7000	1	EA	7000	7000
8	8000	1	EA	8000	8000
9	9000	1	EA	9000	9000
10	10000	1	EA	10000	10000
11	11000	1	EA	11000	11000
12	12000	1	EA	12000	12000
13	13000	1	EA	13000	13000
14	14000	1	EA	14000	14000
15	15000	1	EA	15000	15000
16	16000	1	EA	16000	16000
17	17000	1	EA	17000	17000
18	18000	1	EA	18000	18000
19	19000	1	EA	19000	19000
20	20000	1	EA	20000	20000
21	21000	1	EA	21000	21000
22	22000	1	EA	22000	22000
23	23000	1	EA	23000	23000
24	24000	1	EA	24000	24000
25	25000	1	EA	25000	25000
26	26000	1	EA	26000	26000
27	27000	1	EA	27000	27000
28	28000	1	EA	28000	28000
29	29000	1	EA	29000	29000
30	30000	1	EA	30000	30000
31	31000	1	EA	31000	31000
32	32000	1	EA	32000	32000
33	33000	1	EA	33000	33000
34	34000	1	EA	34000	34000
35	35000	1	EA	35000	35000
36	36000	1	EA	36000	36000
37	37000	1	EA	37000	37000
38	38000	1	EA	38000	38000
39	39000	1	EA	39000	39000
40	40000	1	EA	40000	40000
41	41000	1	EA	41000	41000
42	42000	1	EA	42000	42000
43	43000	1	EA	43000	43000
44	44000	1	EA	44000	44000
45	45000	1	EA	45000	45000
46	46000	1	EA	46000	46000
47	47000	1	EA	47000	47000
48	48000	1	EA	48000	48000
49	49000	1	EA	49000	49000
50	50000	1	EA	50000	50000
51	51000	1	EA	51000	51000
52	52000	1	EA	52000	52000
53	53000	1	EA	53000	53000
54	54000	1	EA	54000	54000
55	55000	1	EA	55000	55000
56	56000	1	EA	56000	56000
57	57000	1	EA	57000	57000
58	58000	1	EA	58000	58000
59	59000	1	EA	59000	59000
60	60000	1	EA	60000	60000
61	61000	1	EA	61000	61000
62	62000	1	EA	62000	62000
63	63000	1	EA	63000	63000
64	64000	1	EA	64000	64000
65	65000	1	EA	65000	65000
66	66000	1	EA		

Perform Data Analysis including GIS representation of data, Closeout Report, and associated project management.

Breakdown of Cost Data:

Item: Develop Documentation

Units: hours

Unit Cost: 320

Unit Cost Adjustment Factor: none

Revised Unit Hours: 320

Required level of effort:

Environmental Engineer - 80 hours

Environmental Scientist - 20 hours

Computer Specialist - 160 hours (GIS, SWD)

Manger - 20 hours

Administrative - 20 hours

Cost Estimators - 20 hours

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	hrs							
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried		Linear	20.00	Hours
Factors	20	hrs							
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried		Linear	20.00	Hours
Factors	20	hrs							
750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried		Linear	160.00	Hours
Factors	160	hrs							
750	STRAIGHT TIME BASE	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs		Linear	20.00	Hours
Factors	20	Hours							
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried		Linear	20.00	Hours
Factors	20	hrs							

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	4.767.97	Dollars
Factors	4767.97 Dollars							
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1.888.79	Dollars
Factors	1888.79 Dollars							

Activity ID: 1GGE161200	<i>Description:</i> Comparative Analysis of Alternative & Remedy Sel
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Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Comparative Analysis of Alternative & Remedy Selec	1.00	each	EE	306	306	7,142	14,378	0	21,520	2,521	24,041
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	3,630	3,630	0	3,630
Total for Activity 1GGE161200:						306	7,142	14,378	3,630	25,150	2,521	27,672

Line Item 10 - Comparative Analysis of Alternative & Remedy Select

BOE

Estimator's Experience - Estimator has 6 years experience preparing similar documents

WBS No: 1GAB0401
Activity ID: 1GGE161200

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Experience Item Desc - Operable Unit No.4 IM/IRA
Breakdown of Cost Data:
Item - Labor hours, subcontractor costs
Units - Lot
Unit Cost - 306 labor hours, \$17,000 subcontract dollars
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	135.00	Hours
Factors 135 hours								
750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried	Linear	90.00	Hours
Factors 90 hours								
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	81.00	Hours
Factors 81 hours								
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	14,377.92	Dollars
Factors 17000 Dollars								

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Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	2,506.83	Dollars
Factors 2506.83 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1,123.49	Dollars
Factors 1123.49 Dollars								

Activity ID: 1GGE161235 Description: Internal Review & Comment Incorporation

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	RMRS Review & Comment Incorporation	1.00	each	EE	350	350	9,114	7,189	0	16,303	3,217	19,521
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	2,948	2,948	0	2,948
Total for Activity 1GGE161235:						350	9,114	7,189	2,948	19,251	3,217	22,468

Line Item 10 - RMRS Review & Comment Incorporation

BOE

Estimator's Experience - Estimator has 6 years experience preparing similar documents
Experience Item Desc - Operable Unit No.4 IM/IRA
Breakdown of Cost Data:
Item - Labor hours, subcontractor costs
Units - Lot
Unit Cost - 350 labor hours, \$8,500 subcontract dollars
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors 80 Hours								
750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried	Linear	135.00	Hours
Factors 135 hours								
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	135.00	Hours
Factors 135 Hours								
A5H	SUBCONTRACTED SRVS	S020	ENVIRONMENTAL SCIENTISTS	K265S	ER Programs	Linear	7,188.96	Dollars
Factors 8500 Dollars								

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WBS No: 1GAB0401
Activity ID: 1GGE161235

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	2.035.44 Dollars
Factors		2035.44 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	912.22 Dollars
Factors		912.223 Dollars					

Activity ID: 1GGE161250 Description: DOE Review & Comment Incorporation

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	DOE / KH Review & Comment Incorporation	1.00	each	EE	295	295	7.339	3.594	0	10.934	2.591	13.525
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	2.042	2.042	0	2.042
Total for Activity 1GGE161250:						295	7.339	3.594	2.042	12.976	2.591	15.567

Line Item 10 - DOE / KH Review & Comment Incorporation

BOE

Estimator's Experience - Estimator has 6 years experience preparing similar documents
Experience Item Desc - Operable Unit No.4 IM/IRA
Breakdown of Cost Data:
Item - Labor hours, subcontractor costs
Units - Lot
Unit Cost - 295 labor hours, \$4,250 subcontract dollars
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	80.00 Hours
Factors		80 hours					
750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried	Linear	135.00 Hours
Factors		135 hours					
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	80.00 Hours
Factors		80 hours					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	3.594.48 Dollars
Factors		4250 Dollars					

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Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1.410.24 Dollars
Factors		1410.24 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	632.03 Dollars
Factors		632.028 Dollars					

Activity ID: 1GGE161275 Description: Agency Review & Comment Incorporation

Cost Risk 4 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Agency Review & Comment Incorporation	1.00	each	EE	313	313	7.920	7.189	0	15.109	2.796	17.905
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	2.762	2.762	0	2.762
Total for Activity 1GGE161275:						313	7.920	7.189	2.762	17.872	2.796	20.667

Line Item 10 - Agency Review & Comment Incorporation

BOE

Estimator's Experience - Estimator has 6 years experience preparing similar documents
Experience Item Desc - Operable Unit No.4 IM/IRA
Breakdown of Cost Data:
Item - Labor hours, subcontractor costs

WBS No: 1GAB0401
Activity ID: 1GGE161275

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Units - Lot
Unit Cost - 313 labor hours, \$8,500 subcontract dollars
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
	750	STRAIGHT TIME BASE	G010 ADMINISTRATIVE ASSISTANTS	R100S RMRS Salaried	Linear	80.00	Hours
Factors	80	hours					
	750	STRAIGHT TIME BASE	P060 COMPUTER SYSTEMS ANALYSTS	R100S RMRS Salaried	Linear	135.00	Hours
Factors	135	hours					
	750	STRAIGHT TIME BASE	S020 ENVIRONMENTAL SCIENTISTS	R100S RMRS Salaried	Linear	18.00	Hours
Factors	18	Hours					
	750	STRAIGHT TIME BASE	S020 ENVIRONMENTAL SCIENTISTS	R100S RMRS Salaried	Linear	80.00	Hours
Factors	80	hours					
	A5H	SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	7.188.96	Dollars
Factors	8500	Dollars					

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Line Item SYS - Contingency And Escalation

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
	CON	CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	1.925.58	Dollars
Factors	1925.58	Dollars					
	ESC	ESCALATION	0000 NONE	ZDEPT No Department	Linear	836.73	Dollars
Factors	836.73	Dollars					

Activity ID: 1GGE161290 Description: Public Comment Period

Cost Risk 4 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Public Comment period	1.00	each	EE	285	285	7.178	29.241	0	36.419	2.534	38.953
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	6.009	6.009	0	6.009
Total for Activity 1GGE161290:						285	7.178	29.241	6.009	42.428	2.534	44.962

Line Item 10 - Public Comment period

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	80.00	Hours
Factors	80	Hours					
	750	STRAIGHT TIME BASE	G010 ADMINISTRATIVE ASSISTANTS	R100S RMRS Salaried	Linear	80.00	Hours
Factors	80	hours					
	750	STRAIGHT TIME BASE	P060 COMPUTER SYSTEMS ANALYSTS	R100S RMRS Salaried	Linear	80.00	Hours
Factors	80	hours					
	750	STRAIGHT TIME BASE	S020 ENVIRONMENTAL SCIENTISTS	R100S RMRS Salaried	Linear	45.00	Hours
Factors	45	hours					

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

WBS No: 1GAB0401
Activity ID: 1GGE161290

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	10.000.00	Dollars
Factors	10000	Dollars						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	19.241.04	Dollars
Factors	22750	Dollars						

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	4.189.10	Dollars
	Factors 4189.1 Dollars								
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1.820.31	Dollars
	Factors 1820.31 Dollars								

Activity ID: 1GGE161295 Description: Responsiveness Summary & Comment Incorporation

Cost Risk 4 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Responsiveness Summary & Comment Incorporation	1.00	each	EE	320	320	8.307	15.520	0	23.827	2.913	26.740
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	4.995	4.995	0	4.995
Total for Activity 1GGE161295:						320	8.307	15.520	4.995	28.822	2.913	31.735

Line Item 10 - Responsiveness Summary & Comment Incorporation

BOE

Estimator's Experience - Estimator has 6 years experience preparing similar documents
Experience Item Desc - Operable Unit No.4 IM/IRA
Breakdown of Cost Data:
Item - Labor hours, subcontractor costs
Units - Lot
Unit Cost - 320 labor hours, \$18,350 subcontract dollars
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
	Factors	80	Hours						
	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	80.00	Hours
	Factors	80	hours						
	750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried	Linear	80.00	Hours
	Factors	80	hours						
	750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	80.00	Hours
	Factors	80	Hours						
	A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	15.519.70	Dollars
Factors	18350	Dollars							

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	3.478.92	Dollars
	Factors 3478.92 Dollars								
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1.516.20	Dollars
	Factors 1516.2 Dollars								

Activity ID: 1GGE161360 Description: SAP Scoping

Cost Risk 3 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Remediation SAP Scoping	2.00	wk	EE	80	160	4.946	4.939	0	9.886	1.746	11.632

WBS No: 1GAB0401
Activity ID: 1GGE161360

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter * Starts In FY *

SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	1.775	1.775	0	1.775
Total for Activity 1GGE161360:						160	4.946	4.939	1.775	11.661	1.746	13.407

Line Item 10 - Remediation SAP Scoping

BOE

Estimator's Experience - Estimator has 6 years experience preparing similar documents
Experience Item Desc - 903 Drum Storage, 903 Lip Area, and Americium Zone Sampling and Analysis Plan
Breakdown of Cost Data:
Item - Labor hours, subcontract dollars
Units - week
Unit Cost - 80 labor hours, \$2,920 Subcontractor Costs
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This BOE provides a environmental engineer, a environmental scientist at full-time each week for the duration of the activity. The activity is baselined for two weeks.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours						
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2.469.62	Dollars
Factors	2920	Dollars						

1 FTE for a week \$73 * 40 (2 weeks)

0.84576 [SYS 061400] .84576000 - System

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1.231.89	Dollars
Factors	1231.89	Dollars						
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	543.57	Dollars
Factors	543.567	Dollars						

Activity ID: 1GGE161370 Description: Prepare SAP

Cost Risk 3 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Prepare SAP	1.00	each	EE	400	400	11.368	42.288	0	53.656	4.013	57.669
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	8.803	8.803	0	8.803
Total for Activity 1GGE161370:						400	11.368	42.288	8.803	62.459	4.013	66.472

Line Item 10 - Prepare SAP

BOE

Estimator's Experience - Estimator has 6 years experience preparing similar documents
Experience Item Desc - 903 Drum Storage, 903 Lip Area, and Americium Zone Sampling and Analysis Plan
Breakdown of Cost Data:
Item - Labor hours, subcontractor costs
Units - Lot
Unit Cost - 400 labor hours, \$50,000 subcontract dollars
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This BOE provides one computer systems analysts full-time and a chemist and environmental engineer at three-fourths time for activity. The activity is baselined for 60 days.

The BOE also provides for \$50k of subcontract support. This provides for 2 FTE engineers for two months @ \$73 per hour and admin support for 100 hours @ \$32 per hour for a total of \$49,920.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

WBS No: 1GAB0401
Activity ID: 1GGE161370

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project
WBS Filter
Activity Filter
Baseline Devl
1GAB
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Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	120.00	Hours
Factors	120 Hours					
	750 STRAIGHT TIME BASE	P060 COMPUTER SYSTEMS ANALYSTS	R100S RMRS Salaried	Linear	160.00	Hours
Factors	160 Hours					
	750 STRAIGHT TIME BASE	S010 CHEMISTS	K267S Analytical Laboratory Services	Linear	120.00	Hours
Factors	120 Hours					
	A5H SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	42,288.00	Dollars
Factors	50000 Dollars					

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	6,107.63	Dollars
Factors	6107.63 Dollars					
	ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	2,694.98	Dollars
Factors	2694.98 Dollars					

Activity ID: 1GGE161385 Description: Internal Review SAP & Incorporate Comments

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Internal Review SAP & Incorporate Comments	1.00	each	EE	200	200	5,825	1,903	0	7,728	2,056	9,784
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	1,477	1,477	0	1,477
Total for Activity 1GGE161385:						200	5,825	1,903	1,477	9,205	2,056	11,262

Line Item 10 - Internal Review SAP & Incorporate Comments

BOE

Estimator's Experience - Estimator has 6 years experience preparing similar documents
Experience Item Desc - 903 Drum Storage, 903 Lip Area, and Americium Zone Sampling and Analysis Plan
Breakdown of Cost Data:
Item - Labor hours, subcontractor costs
Units - Lot
Unit Cost - 200 labor hours, \$2,250 subcontract dollars
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This BOE provides one environmental engineer 80 hours each for the duration of the activity. It also provides for an environmental scientist and computer systems analyst 60 hours for the activity. It also provides 31 hours for subcontractor support for this activity (one FTE at \$73 hour).

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	80.00	Hours
Factors	80 Hours					
	750 STRAIGHT TIME BASE	P060 COMPUTER SYSTEMS ANALYSTS	R100S RMRS Salaried	Linear	60.00	Hours
Factors	60 Hours					
	750 STRAIGHT TIME BASE	S020 ENVIRONMENTAL SCIENTISTS	R100S RMRS Salaried	Linear	60.00	Hours
Factors	60 Hours					
	A5H SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	1,902.96	Dollars
Factors	2250 Dollars					

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	1,020.21	Dollars
Factors	1020.21 Dollars					

WBS No: 1GAB0401
Activity ID: 1GGE161385

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	457.23	Dollars
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Factors 457.229 Dollars

Activity ID: 1GGE161400 Description: DOE Review SAP & Incorporate Comments

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	DOE Review SAP & Incorporate Comments	1.00	each	EE	180	180	5,234	1,903	0	7,137	1,848	8,984
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	1,357	1,357	0	1,357
Total for Activity 1GGE161400:						180	5,234	1,903	1,357	8,493	1,848	10,341

Line Item 10 - DOE Review SAP & Incorporate Comments

BOE

Estimator's Experience - Estimator has 6 years experience preparing similar documents
Experience Item Desc - 903 Drum Storage, 903 Lip Area, and Americium Zone Sampling and Analysis Plan
Breakdown of Cost Data:
Item - Labor hours, subcontractor costs
Units - Lot
Unit Cost - 180 labor hours, \$2,250 subcontract dollars
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This BOE provides one environmental scientist, computer systems analyst, and an environmental engineer 60 hours each for this activity. This activity has a duration of 19 days.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	60.00	Hours
Factors 60 Hours					
750 STRAIGHT TIME BASE	P060 COMPUTER SYSTEMS ANALYSTS	R100S RMRS Salaried	Linear	60.00	Hours
Factors 60 Hours					
750 STRAIGHT TIME BASE	S020 ENVIRONMENTAL SCIENTISTS	R100S RMRS Salaried	Linear	60.00	Hours
Factors 60 Hours					
A5H SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	1,902.96	Dollars
Factors 2250 Dollars					

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	936.81	Dollars
Factors 936.807 Dollars					
ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	419.85	Dollars
Factors 419.849 Dollars					

Activity ID: 1GGE161425 Description: SAP Agency Review & Approval

Cost Risk 3 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	SAP Agency Review & Approval	1.00	each	EE	192	192	6,425	3,045	0	9,470	2,268	11,737
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	1,792	1,792	0	1,792
Total for Activity 1GGE161425:						192	6,425	3,045	1,792	11,261	2,268	13,529

Line Item 10 - SAP Agency Review & Approval

BOE

Experience Item Desc - 903 Drum Storage, 903 Lip Area, and Americium Zone Sampling and Analysis Plan
Breakdown of Cost Data:
Item - Labor hours, subcontractor costs
Units -hours per month, subcontractor dollars for activity
Unit Cost - 192 labor hours, \$3,600 subcontract dollars
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

WBS No: 1GAB0401
Activity ID: 1GGE161425

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

This BOE provides for a environmental engineer full-time for two weeks, an computer systems analyst full-time for one week, and a K-H manger and environmental scientist for 3 days for this activity.

This BOE also provides for approximately 50 hours of subcontract engineering time at \$73 per hour.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	Hours						
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	9.00	Hours
Factors	9	Hours						
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	9.00	Hours
Factors	9	Hours						
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	27.00	Hours
Factors	27	Hours						
750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours						
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	27.00	Hours
Factors	27	Hours						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	3,044.74	Dollars
Factors	3600	Dollars						

0.84576 [SYS 061400] .84576000 - System

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1,243.09	Dollars
Factors	1243.09	Dollars						
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	548.51	Dollars
Factors	548.509	Dollars						

Activity ID: 1GGE161480 Description: 903 Pad Site Documentation

Cost Risk 4 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	903 Pad. Lip. & Am Zone Site Documentation	2.00	each	EE	1,600	3,200	80,506	0	0	80,506	28,220	108,725
20	Subcontractor Costs	1.00	each	EE	0	0	0	333,399	0	333,399	0	333,399
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	83,553	83,553	0	83,553
Total for Activity 1GGE161480:						3,200	80,506	333,399	83,553	497,457	28,220	525,677

Line Item 10 - 903 Pad, Lip, & Am Zone Site Documentation

BOE

Estimator's Experience - Estimator interviewed Trench 1 field supervisor to identify Site resources required to complete documentation requirements
Experience Item Desc - T-1 Site Documentation
Breakdown of Cost Data:
Item - Site Labor hours
Units - hours per month
Unit Cost - 1,600 Site Labor Hours (2 month activity duration)
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This BOE provides for a crit engineer, Admin. assist., laborer, Rad Engineer, Env. Scientist, geologist, 2 RCTs and 2 Heavy equipment operators full-time each month for two months.

This work will be conducted primarily by subcontract personnel with site support. This basis of estimate assumes site personnel will be on the project for two months, the initial planning month and one additional month to review and provide input on draft documents.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
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WBS No: 1GAB0401
Activity ID: 1GGE161480

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

750	STRAIGHT TIME BASE	E080	NUCLEAR (CRITICALITY) ENGINEER	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160	Hours	1	crit engineer				
750	STRAIGHT TIME BASE	G040	SECRETARIES	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160	Hours	1	Admin				
750	STRAIGHT TIME BASE	L090	GENERAL LABORER	KG10H	Remediation Steelworkers	Linear	160.00	Hours
Factors	160	Hours	1	laborer				
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160	Hours	1	Rad Engineer				
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160	Hours	1	Env. Scientist				
750	STRAIGHT TIME BASE	S030	GEOLOGISTS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160	Hours	1	geolotist				
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KG10H	Remediation Steelworkers	Linear	320.00	Hours
Factors	160	Hours	2	RCTs				
750	STRAIGHT TIME BASE	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	320.00	Hours
Factors	160	Hours	2	Heavy equipment operators				

Line Item 20 - Subcontractor Costs

BOE	Estimator's Experience - Estimator interviewed Trench 1 field supervisor to identify Subcontractor resources and time requirements to complete documentation requirements Experience Item Desc - T-1 Site Documentation Breakdown of Cost Data: Item -Subcontractor costs Units - Lot Unit Cost - \$394,000 subcontract dollars Unit Cost Adjustment factor - Revised Unit Cost - Basis for adjustment - T-1 cost report reported 5,413.13 Site personnel hours for planning and \$230,000 for subcontractor costs for a total of approximately \$500,000 T-1 was planned by site personnel. This BOE provides subcontractor costs which were estimated by assuming 5 FTEs (engineer level at \$73/hour) would be required for 6 month duration totaling \$394,200. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.												
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Resources	Cost Element	Skill	Department	Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	333.398.60	Dollars
Factors	73	Dollars	5	FTEs	9	hours per day
	6	months			20	days per month
					0.84576	[SYS 061400] .84576000 - System

Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	58.226.85	Dollars
	Factors 58226.9 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	25.325.74	Dollars
	Factors 25325.7 Dollars									

Activity ID: 1GGE161490 Description: 903 Pad Procurement (Documentation)

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	903 Pad Procurement	1.00	each	EE	320	320	11.395	0	0	11.395	4.023	15.418
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	2.328	2.328	0	2.328
Total for Activity 1GGE161490:						320	11.395	0	2.328	13.723	4.023	17.746

Line Item 10 - 903 Pad Procurement

BOE	Estimator's Experience - Estimator has reviewed Acquisition Procedure for requisitioning Commodities and Services and prepare SOWs. Experience Item Desc - T-1 Site Procurements												
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WBS No: 1GAB0401
Activity ID: 1GGE161490

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Breakdown of Cost Data:
Item -Site labor hours
Units - month
Unit Cost - 320 labor hours
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This BOE provides a Environmental Scientist and K-H manager at one-half time and a procurement buyer at full-time for the duration of this activity of one month. The scope of this activity is to prepare a SOW and procure a MTS contractor to prepare the documentation required to perform field work at the 903 Pad, Lip Area and Americium Zone.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	80.00	Hours
	Factors 80 Hours								
	750	STRAIGHT TIME BASE	P030	BUYERS PROCUREMENT AND CON	K216S	Subcontracts Management	Linear	160.00	Hours
	Factors 160 Hours								
	750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	80.00	Hours
	Factors 80 Hours								

Line Item SYS - Contingency And Escalation

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1.607.63	Dollars
	Factors 1607.63 Dollars								
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	720.49	Dollars
	Factors 720.492 Dollars								

Activity ID: 1GGE161500 Description: 903 Pad Readiness Review

Cost Risk 5 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Site Resource	2.00	each	EE	7,640	15.280	488.578	0	0	488.578	137.779	626.358
20	Subcontractor	2.00	each	EE	0	0	0	296.354	0	296.354	0	296.354
30	Leases	2.00	each	EE	0	0	0	247.160	0	247.160	0	247.160
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	175.661	175.661	0	175.661
Total for Activity 1GGE161500:						15.280	488.578	543.514	175.661	1,207.754	137.779	1,345.533

Line Item 10 - Site Resource

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E080	NUCLEAR (CRITICALITY) ENGINEER	R100S	RMRS Salaried	Linear	160.00	Hours
	Factors 160 hours		1 Crit Engineer for AB						
	750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	K271S	Technical Support Oversight & Inteagation	Linear	960.00	Hours
	Factors 160 Hours		6 Readiness Assessors						
	750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K107S	Eng. Envir. Safetv & Quality Programs	Linear	160.00	Hours
	Factors 160 Hours		1 QA						

Estimators Experience - Estimator interviewed T-1 Field Supervisor to determine site resource needs
Experience Item Desc - T-1 Readiness Assessment Duration of 6 weeks
Breakdown of Cost Data:
Item - Site labor
Units - hours per month
Unit Cost - 7,640 hour per month
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

Estimate based on labor resources assumed to be the same as those required to perform excavation activity. Readiness assessment will require 6 readiness assessors full-time for the duration of the activity estimated to take two months. Training activities and mock up activities will be conducted during this time period.

WBS No: 1GAB0401
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750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	480.00	Hours
Factors	160	Hours	3	Managers Oversight				
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160	Hours	1	Rad Engineer				
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	K107S	Eng. Envir. Safetv & Quality Programs	Linear	160.00	Hours
Factors	160	Hours	1	Safetv				
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLOGI	KG10H	Remediation Steelworkers	Linear	2,080.00	Hours
Factors	160	Hours	13	RCTs				
750	STRAIGHT TIME BASE	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	480.00	Hours
Factors	40	Hours	12	D&D Worker OT				
751	OVERTIME BASE & PRE.	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	40	hours	2	Forman OT				
751	OVERTIME BASE & PRE.	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	320.00	Hours
Factors	160	hours	2	Foreman				
751	OVERTIME BASE & PRE.	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	120.00	Hours
Factors	40	Hours	3	Managers OT				
751	OVERTIME BASE & PRE.	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hours	1	Rad Eng OT				
751	OVERTIME BASE & PRE.	T050	RADIATION CONTROL TECHNOLOGI	KG10H	Remediation Steelworkers	Linear	520.00	Hours
Factors	40	Hours	13	RCT Overtime				
751	OVERTIME BASE & PRE.	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	1,920.00	Hours
Factors	160	Hours	12	D&D worker				

Line Item 20 - Subcontractor

BOE	Estimator's Experience - Estimator interviewed T-1 Project Supervisor to determine subcontractor support requirements during remediation Experience Item Desc - T-1 Remediation Breakdown of Cost Data: Item - subcontracted services Units - dollars per month Unit Cost - \$175,200 (activity duration is 2 months) Unit Cost Adjustment factor - Revised Unit Cost - Basis for adjustment This BOE provides the following subcontract personnel 1 Project Manager, 2 Project Supervisors, 2 HSS Specialist, 3 Waste Generators, 1 Field Supervisor, 1 Technician/Runner 2 Geologists to implement SAP. These 12 personnel are required full-time with 40 hours of overtime for the duration of the activity estimated at two months. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.							
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Resources	Cost Element	Skill	Department	Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	118,541.70	Dollars
Factors	73 Dollars	12 subcontract personnel	160 hours per month			
				0.84576	[SYS 061400]	.84576000 - Svstem
A5H	SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	29,635.43	Dollars
Factors	73 Hours	12 subcontract personnel	40 hours overtime per month			
				0.84576	[SYS 061400]	.84576000 - Svstem

Line Item 30 - Leases

BOE	Estimators Experience - Estimator interviewed Trench 1 field supervisor and project controls support to obtain rental equipment estimates Experience Item Desc - Trench 1 rental equipment Breakdown of Cost Data: Item - Equipment rental Units - dollars per month Unit Cost - \$123,580 per month Unit Cost Adjustment factor - Revised Unit Cost - Basis for adjustment - This BOE provides for monthly rentals of heavy equipment, HSS supplies, portolietts, support trailers, fuel, breathing air compressors, purchases of PPE and							
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provides lunches to workers. The readiness review is estimated to take 2 months.

Resources

Cost Element			Skill		Department		Curve	Quantity	Units
A5C	SUPPLIES		0000	NONE	K265S	ER Programs	Linear	20.400.00	Dollars
Factors	17	Dollars		30	Men PPE	2	Suits per Day	20	Days per month
A5L	RENTALS		0000	NONE	K265S	ER Programs	Linear	80.00	Dollars
Factors	20	Dollars		4	Portoliets				
A5L	RENTALS		0000	NONE	K265S	ER Programs	Linear	2.500.00	Dollars
Factors	2500	Dollars		1	Fork Lift				
A5L	RENTALS		0000	NONE	K265S	ER Programs	Linear	1.000.00	Dollars
Factors	1000	Dollars		1	Fence				
A5L	RENTALS		0000	NONE	K265S	ER Programs	Linear	9.000.00	Dollars
Factors	9000	Dollars		1	Loader				
A5L	RENTALS		0000	NONE	K265S	ER Programs	Linear	40.000.00	Dollars
Factors	40000	Dollars		1	H&S Support Equipment				
A5L	RENTALS		0000	NONE	K265S	ER Programs	Linear	2.000.00	Dollars
Factors	500	Dollars		4	trailers				
A5L	RENTALS		0000	NONE	K265S	ER Programs	Linear	22.000.00	Dollars
Factors	11000	Dollars		2	Breathing Air Compressors				
A5L	RENTALS		0000	NONE	K265S	ER Programs	Linear	14.000.00	Dollars
Factors	14000	Dollars		1	Excavator				
A5L	RENTALS		0000	NONE	K265S	ER Programs	Linear	5.000.00	Dollars
Factors	5000	Dollars		1	Water Truck				
A5N	FUEL & UTILITIES		0000	NONE	K265S	ER Programs	Linear	2.000.00	Dollars
Factors	2000	Dollars		1	Fuel				
A5R	MISC EXPENSES		0000	NONE	K265S	ER Programs	Linear	5.600.00	Dollars
Factors	8	Dollars		35	Men Lunches	20	days per month		

Line Item SYS - Contingency And Escalation

BOE

Cost Element			Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	63.334.67	Dollars
Factors	63334.7	Dollars							
ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	112.326.70	Dollars
Factors	112327	Dollars							

Activity ID: 1GGE161530 Description: 903 Pad Mobilization & Site Preparation

Cost Risk 5 Schedule Risk 5

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Site Resources	2.00	each	EE	6.680	13.360	385.954	0	0	385.954	128.106	514.060
20	Subs & Supplies	1.00	each	EE	0	0	0	3.229.807	0	3.229.807	0	3.229.807
30	Leases	2.00	each	EE	0	0	0	247.160	0	247.160	0	247.160
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	998.221	998.221	0	998.221
Total for Activity 1GGE161530:						13.360	385.954	3.476.967	998.221	4.861.143	128.106	4.989.249

Line Item 10 - Site Resources

BOE

Estimators Experience - Estimator interviewed T-1 Field Supervisor to determine site resource needs
Experience Item Desc - T-1 Readiness Assessment Duration of 6 weeks
Breakdown of Cost Data:
Item - Site labor hours
Units - hour per month
Unit Cost - 6,680 hour per month
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

Estimate based on labor resources assumed to be the same as those required to perform excavation activity. Activity estimated to take two months.
Additional training activities will also be conducted during this time period.

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Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	E080 NUCLEAR (CRITICALITY) ENGINEER	R100S RMRS Salaried	Linear	160.00	Hours
Factors	160 hours	1 Crit Engineer for AB				
	750 STRAIGHT TIME BASE	M040 MANAGERS (GRADE 64 - 68)	K107S Enq. Envir. Safetv & Quality Programs	Linear	160.00	Hours
Factors	160 Hours	1 QA				
	750 STRAIGHT TIME BASE	M040 MANAGERS (GRADE 64 - 68)	R100S RMRS Salaried	Linear	480.00	Hours
Factors	160 Hours	3 Managers Oversight				
	750 STRAIGHT TIME BASE	P080 HEALTH PHYSICISTS	R100S RMRS Salaried	Linear	160.00	Hours
Factors	160 Hours	1 Rad Engineer				
	750 STRAIGHT TIME BASE	P090 INDUSTRIAL HYGIENISTS	K107S Enq. Envir. Safetv & Quality Programs	Linear	160.00	Hours
Factors	160 Hours	1 Safetv				
	750 STRAIGHT TIME BASE	T050 RADIATION CONTROL TECHNOLOGI	KG10H Remediation Steelworkers	Linear	2,080.00	Hours
Factors	160 Hours	13 RCTs				
	750 STRAIGHT TIME BASE	T060 D&D HAZ REDUC TECH / RISK RED	KG10H Remediation Steelworkers	Linear	480.00	Hours
Factors	40 Hours	12 D&D Worker OT				
	751 OVERTIME BASE & PRE.	M010 FOREMEN / TEAM LEADS / GROUP	R100S RMRS Salaried	Linear	320.00	Hours
Factors	160 hours	2 Foreman				
	751 OVERTIME BASE & PRE.	M010 FOREMEN / TEAM LEADS / GROUP	R100S RMRS Salaried	Linear	80.00	Hours
Factors	40 hours	2 Forman OT				
	751 OVERTIME BASE & PRE.	M040 MANAGERS (GRADE 64 - 68)	R100S RMRS Salaried	Linear	120.00	Hours
Factors	40 Hours	3 Managers OT				
	751 OVERTIME BASE & PRE.	P080 HEALTH PHYSICISTS	R100S RMRS Salaried	Linear	40.00	Hours
Factors	40 hours	1 Rad Enq OT				
	751 OVERTIME BASE & PRE.	T050 RADIATION CONTROL TECHNOLOGI	KG10H Remediation Steelworkers	Linear	520.00	Hours
Factors	40 Hours	13 RCT Overtime				
	751 OVERTIME BASE & PRE.	T060 D&D HAZ REDUC TECH / RISK RED	KG10H Remediation Steelworkers	Linear	1,920.00	Hours
Factors	160 Hours	12 D&D worker				

Line Item 20 - Subs & Supplies

BOE	Estimator's Experience - Estimator interviewed T-1 Project Supervisor to determine subcontractor support requirements during remediation Experience Item Desc - T-1 Remediation Breakdown of Cost Data: Item - subcontracted services Units - dollars Unit Cost - \$3,664,210 Unit Cost Adjustment factor - Revised Unit Cost - Basis for adjustment This BOE provides the following subcontract personnel 1 Project Manager, 2 Project Supervisors, 2 HSS Specialist, 3 Waste Generators, 1 Field Supervisor, 1 Technician/Runner 2 Geologists to implement SAP. These 12 personnel are required full-time with 40 hours of overtime for the duration of the activity estimated at two months. The BOE also provides for subcontract dollars to perform construction of the weather structure, environmental media sampling to include air, groundwater and surface waters during remediation. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
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Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	A5C SUPPLIES	0000 NONE	K265S ER Programs	Linear	64,240.00	Dollars
Factors	146 Dollars	440 55-Gallon Drums for Tru Waste				
	A5C SUPPLIES	0000 NONE	K265S ER Programs	Linear	200,000.00	Dollars
Factors	200000 Dollars	1 Supplies				
	A5C SUPPLIES	0000 NONE	K265S ER Programs	Linear	555,560.00	Dollars
Factors	380 Dollars	1462 Soft Side Waste Packages				
	A5C SUPPLIES	0000 NONE	K265S ER Programs	Linear	28,000.00	Dollars
Factors	7000 Dollars	4 Soft Side Waste Pack Lifting Frame				

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A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	761.184.00	Dollars
Factors	900000 Dollars	1	HEPA Upgrade				0.84576 [SYS 061400] .84576000 - Svstem	
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	71.889.60	Dollars
Factors	85000 Dollars	1	Wetland Mitigation				0.84576 [SYS 061400] .84576000 - Svstem	
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	59.270.86	Dollars
Factors	73 Dollars	12	subcontract personnel Over Time	40	hour per months	2 months	0.84576 [SYS 061400] .84576000 - Svstem	
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	361.139.50	Dollars
Factors	427000 Dollars	1	Air sampling				0.84576 [SYS 061400] .84576000 - Svstem	
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	253.728.00	Dollars
Factors	150000 Dollars	2	Weather Structure Constructions				0.84576 [SYS 061400] .84576000 - Svstem	
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	592.032.00	Dollars
Factors	350000 Dollars	2	Weather Structure Purchases				0.84576 [SYS 061400] .84576000 - Svstem	
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	59.270.86	Dollars
Factors	73 Dollars	12	subcontract personnel	40	hour per month	2 months	0.84576 [SYS 061400] .84576000 - Svstem	
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	160.060.10	Dollars
Factors	189250 Dollars	1	Groundwater Monitoring Program				0.84576 [SYS 061400] .84576000 - Svstem	
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	63.432.00	Dollars
Factors	75000 Dollars	1	Surface Water Monitoring Progam				0.84576 [SYS 061400] .84576000 - System	

Line Item 30 - Leases

BOE	Estimators Experience - Estimator interviewed Trench 1 field supervisor and project controls support to obtain rental equipment estimates Experience Item Desc - Trench 1 rental equipment Breakdown of Cost Data: Item - Rentals Units - dollars per month Unit Cost - \$123,560 Unit Cost Adjustment factor - Revised Unit Cost - Basis for adjustment - This BOE provides for monthly rentals of heavy equipment, HSS supplies, portoliets, support trailers, fuel, breathing air compressors, purchases of PPE and provides lunches to workers. The readiness review is estimated to take 2 months.
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Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	A5C	SUPPLIES		0000	NONE	K265S	ER Programs	Linear	20.400.00	Dollars
Factors	17	Dollars		30	Men PPE	2	Suits per Dav	20	Days per month	
A5L	RENTALS			0000	NONE	K265S	ER Programs	Linear	2.000.00	Dollars
Factors	500	Dollars		4	trailers					
A5L	RENTALS			0000	NONE	K265S	ER Programs	Linear	2.500.00	Dollars
Factors	2500	Dollars		1	Fork Lift					
A5L	RENTALS			0000	NONE	K265S	ER Programs	Linear	22.000.00	Dollars
Factors	11000	Dollars		2	Breathing Air Compressors					
A5L	RENTALS			0000	NONE	K265S	ER Programs	Linear	1.000.00	Dollars
Factors	1000	Dollars		1	Fence					
A5L	RENTALS			0000	NONE	K265S	ER Programs	Linear	14.000.00	Dollars
Factors	14000	Dollars		1	Excavator					
A5L	RENTALS			0000	NONE	K265S	ER Programs	Linear	9.000.00	Dollars
Factors	9000	Dollars		1	Loader					

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A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	5,000.00	Dollars
Factors	5000	Dollars	1	Water Truck				
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	80.00	Dollars
Factors	20	Dollars	4	Portolietts				
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	40,000.00	Dollars
Factors	40000	Dollars	1	H&S Support Equioment				
A5N	FUEL & UTILITIES	0000	NONE	K265S	ER Programs	Linear	2,000.00	Dollars
Factors	2000	Dollars	1	Fuel				
A5R	MISC EXPENSES	0000	NONE	K265S	ER Programs	Linear	5,600.00	Dollars
Factors	8	Dollars	35	Men Lunches	20	days per month		

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element			Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	675,277.30	Dollars
Factors	675277 Dollars								
ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	322,944.20	Dollars
Factors	322944 Dollars								

Activity ID: 1GGE161540 Description: 903 Pad Remediation

Cost Risk 5 Schedule Risk 5

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Site Resource Hours	12.00	each	EE	6,680	80,160	2,315,726	0	0	2,315,726	713,309	3,029,035
20	Subs & Supplies	1.00	each	EE	0	0	0	3,988,068	0	3,988,068	0	3,988,068
30	Leases	12.00	each	EE	0	0	0	1,482,960	0	1,482,960	0	1,482,960
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	2,684,360	2,684,360	0	2,684,360
Total for Activity 1GGE161540:						80,160	2,315,726	5,471,028	2,684,360	10,471,114	713,309	11,184,423

Line Item 10 - Site Resource Hours

BOE

Estimators Experience - Estimator interviewed T-1 Field Supervisor to determine resource needs for a excavation activity using site resources
Experience Item Desc - T-1 Excavation
Breakdown of Cost Data:
Item - site labor hours
Units - hours per month
Unit Cost - 6,680 hours (12 month activity duration)
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

Estimate based on number of personnel required to perform T-1excavation activity. Activity estimated to take twelve months.

Resources

Cost Element			Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE		E080	NUCLEAR (CRITICALITY) ENGINEER	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160	hours	1	Crit Engineer for AB					
750	STRAIGHT TIME BASE		M040	MANAGERS (GRADE 64 - 68)	K107S	Eng. Envir. Safetv & Quality Programs	Linear	160.00	Hours
Factors	160	Hours	1	QA					
750	STRAIGHT TIME BASE		M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	480.00	Hours
Factors	160	Hours	3	Managers Oversight					
750	STRAIGHT TIME BASE		P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160	Hours	1	Rad Engineer					
750	STRAIGHT TIME BASE		P090	INDUSTRIAL HYGIENISTS	K107S	Eng. Envir. Safetv & Quality Programs	Linear	160.00	Hours
Factors	160	Hours	1	Safetv					
750	STRAIGHT TIME BASE		T050	RADIATION CONTROL TECHNOLIGI	KG10H	Remediation Steelworkers	Linear	2,080.00	Hours
Factors	160	Hours	13	RCTs					
750	STRAIGHT TIME BASE		T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	480.00	Hours
Factors	40	Hours	12	D&D Worker OT					
751	OVERTIME BASE & PRE.		M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	320.00	Hours
Factors	160	hours	2	Foreman					

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751	OVERTIME BASE & PRE.	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	40 hours		2 Forman OT					
751	OVERTIME BASE & PRE.	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	120.00	Hours
Factors	40 Hours		3 Managers OT					
751	OVERTIME BASE & PRE.	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 hours		1 Rad Eng OT					
751	OVERTIME BASE & PRE.	T050	RADIATION CONTROL TECHNOLOGI	KG10H	Remediation Steelworkers	Linear	520.00	Hours
Factors	40 Hours		13 RCT Overtime					
751	OVERTIME BASE & PRE.	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	1,920.00	Hours
Factors	160 Hours		12 D&D worker					

Line Item 20 - Subs & Supplies

BOE

Estimator's Experience - Estimator interviewed T-1 Project Supervisor to determine subcontractor support requirements during remediation
Experience Item Desc - T-1 Remediation
Breakdown of Cost Data:
Item - Subcontracted Services
Units - dollars
Unit Cost - \$4,642,140
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment

This BOE provides the following subcontract personnel 1 Project Manager, 2 Project Supervisors, 2 HSS Specialists, 3 Waste Generators, 1 Field Supervisor, 1 Technician/Runner
2 Geologists to implement SAP. These 12 personnel are required full-time with 40 hours of overtime for the duration of the activity estimated at twelve months.

This activity also provides costs for analytical services required to perform confirmation/verification sampling and waste acceptance. Sample number estimates are provided in the activity scope. Analytical costs are estimated at \$1,320,215

Topsoil estimate of \$21k per acre provided by Tracey Spence, T-1 Project Supervisor.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	130.125.00	Dollars
Factors	15 Dollars		8675 Backfill vd3					
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	71.400.00	Dollars
Factors	21000 Dollars		3.4 Topsoil + labor per acre					
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	200.000.00	Dollars
Factors	200000 Dollars		1 Supplies					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	1,422.501.00	Dollars
Factors	73 Dollars per hour		12 subcontract personnel	12 months		160 hours per month		
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	355.625.20	Dollars
Factors	73 Dollars per hour		12 subcontract personnel overtime	12 months		40 hours per month		
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	353.527.70	Dollars
Factors	38000 Dollars		11 Tent Moves					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	253.728.00	Dollars
Factors	150000 Dollars		2 Tent tear down					
A5H	SUBCONTRACTED SRVS	0000	NONE	K267S	Analytical Laboratory Services	Linear	84.576.00	Dollars
Factors	100000 Dollars		1 SID Upgrades					

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WBS Filter 1GAB
Activity Filter *

A5H	SUBCONTRACTED SRVS	0000	NONE	K267S	Analytical Laboratory Services	Linear	1.116.585.00	Dollars
Factors	1320215 Dollars	1	Laboratory Confirmation/WAC/aw/sw					

0.84576 [SYS 061400] .84576000 - System

Line Item 30 - Leases

BOE

Estimators Experience - Estimator interviewed Trench 1 field supervisor and project controls support to obtain rental equipment estimates for work in weather structure
Experience Item Desc - Trench 1 rental equipment
Breakdown of Cost Data:
Item - Rental Equipment
Units - dollars per month
Unit Cost - \$123,580 per month (12 month activity duration)
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

This BOE provides for monthly rentals of heavy equipment, HSS supplies, portoliets, support trailers, fuel, breathing air compressors, purchases of PPE and provides lunches to workers. The remediation and reclamation of the 903 Pad is estimated to take 12 months.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	20.400.00	Dollars
Factors	17 Dollars	30	Men PPE	2	Suits per Day	20	Days per month	
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	22.000.00	Dollars
Factors	11000 Dollars	2	Breathing Air Compressors					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	1.000.00	Dollars
Factors	1000 Dollars	1	Fence					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	14.000.00	Dollars
Factors	14000 Dollars	1	Excavator					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	9.000.00	Dollars
Factors	9000 Dollars	1	Loader					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	2.500.00	Dollars
Factors	2500 Dollars	1	Fork Lift					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	5.000.00	Dollars
Factors	5000 Dollars	1	Water Truck					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	80.00	Dollars
Factors	20 Dollars	4	Portoliets					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	2.000.00	Dollars
Factors	500 Dollars	4	trailers					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	40.000.00	Dollars
Factors	40000 Dollars	1	H&S Support Equipment					
A5N	FUEL & UTILITIES	0000	NONE	K265S	ER Programs	Linear	2.000.00	Dollars
Factors	2000 Dollars	1	Fuel					
A5R	MISC EXPENSES	0000	NONE	K265S	ER Programs	Linear	5.600.00	Dollars
Factors	8 Dollars	35	Men Lunches	20	days per month			

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1.668.627.00	Dollars
Factors	1668627 Dollars							
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1.015.733.00	Dollars
Factors	1015733 Dollars							

Activity ID: 1GGE161575

Description: Prepare 903 Pad Remediation RFP

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	RFP Review and Site Procurement	1.00	each	EE	520	520	15.984	0	0	15.984	5.559	21.543
20	RFP Preperation	1.00	each	EE	0	0	0	43.134	0	43.134	0	43.134

WBS No: 1GAB0401
Activity ID: 1GGE161575

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter * Starts In FY *

SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	14.558	14.558	0	14.558
Total for Activity 1GGE161575:						520	15.984	43.134	14.558	73.676	5.559	79.235

Line Item 10 - RFP Review and Site Procurement

BOE	<p>Estimators Experience - Estimator has 6 years experience preparing and bidding on RFPs Experience Item Desc - 903 Pad HPGe Characterization SOW Breakdown of Cost Data: Item - Site resources for review and support preparation of SOW Units - hours Unit Cost - 520 Hours Unit Cost Adjustment factor - Revised Unit Cost - Basis for adjustment -</p> <p>Comprehensive SOW/RFP for remediation of radiological facility, 903 Pad, 903 Lip Area and Americium Zone, and East Firing Range and Target Area.</p> <p>The BOE provides for a civil eng, mech. eng, nuc eng, QC eng, safety eng at one-quarter time for one month. It also provides for a procurements buyer fulltime for two months.</p>											
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Resources		Cost Element	Skill	Department	Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E020 CIVIL ENGINEERS	K107S Eng. Envir. Safetv & Quality Programs	Linear	40.00	Hours
Factors	40	Hours	1 civil eng				
	750	STRAIGHT TIME BASE	E070 MECHANICAL ENGINEERS	K107S Eng. Envir. Safetv & Quality Programs	Linear	40.00	Hours
Factors	40	Hours	1 mech eng				
	750	STRAIGHT TIME BASE	E080 NUCLEAR (CRITICALITY) ENGINEER	K238S Radiation Protection	Linear	40.00	Hours
Factors	40	Hours	1 nuc eng				
	750	STRAIGHT TIME BASE	E110 QUALITY CONTROL ENGINEERS	K265S ER Programs	Linear	40.00	Hours
Factors	40	Hours	1 QC eng				
	750	STRAIGHT TIME BASE	E120 SAFETY ENGINEERS	K266S Envir. Safetv. Health & Quality	Linear	40.00	Hours
Factors	40	Hours	1 safetv eng				
	750	STRAIGHT TIME BASE	P030 BUYERS PROCUREMENT AND CON	K264S Procurement Systems	Linear	320.00	Hours
Factors	160	Hours	1 procurments buyer	2 months			

Line Item 20 - RFP Preperation

BOE	<p>Estimators Experience - Estimator interviewed T-1 personnel who performed numerous subcontract support procurement and estimated resources required to complete RFP Experience Item Desc - T-1 Subcontractor Procurements Item - Subcontractor resources Units - Dollars Unit Cost - 51,000 Dollars Unit Cost Adjustment factor - Revised Unit Cost - Basis for adjustment - Comprehensive SOW/RFP for remediation of radiological facility, 903 Pad, 903 Lip Area and Americium Zone, and East Firing Range and Target Area.</p> <p>Assumes 2 Engineers FTE for two months spread over the activity duration of 60 days at a rate of \$73 hour. Also provides 160 of administrative support at \$32.</p> <p>This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.</p>											
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Resources		Cost Element	Skill	Department	Curve	Quantity	Units
	A5H	SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	43.133.76	Dollars
Factors	51000	Dollars					

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE											
Resources	<i>Cost Element</i>			<i>Skill</i>		<i>Department</i>		<i>Curve</i>	<i>Quantity</i>	<i>Units</i>	
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department		Linear	10.098.32	Dollars
	<i>Factors</i> 10098.3 Dollars										

WBS No: 1GAB0401
Activity ID: 1GGE161575

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	4,460.09	Dollars
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Factors 4460.09 Dollars

Activity ID: 1GGE161580 Description: 903 Pad Procurement (Remediation)

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Procurement	1.00	each	EE	560	560	16,699	0	0	16,699	5,778	22,477
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	6,294	6,294	0	6,294
Total for Activity 1GGE161580:						560	16,699	0	6,294	22,993	5,778	28,771

Line Item 10 - Procurement

BOE	Estimator's Experience - Estimator has interviewed T-1 Site personnel responsible for procurements. Experience Item Desc - T-1 Site Procurements Breakdown of Cost Data: Item -Site resource labor hours Units - Hours per month Unit Cost - 560 labor hours Unit Cost Adjustment factor - Revised Unit Cost - Basis for adjustment - BOE provides an environmental engineer, and a environmental scientist 160 hours over the 125 day procurement duration. It also provides a procurement buyer one-half time over the procurement duration of three months.
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Resources	Cost Element			Skill		Department		Curve	Quantity	Units	
	750	STRAIGHT TIME BASE		E050	ENVIRONMENTAL ENGINEERS		R100S	RMRS Salaried	Linear	160.00	Hours
	Factors	160	Hours	1		Environmental Engineer					
	750	STRAIGHT TIME BASE		P030	BUYERS PROCUREMENT AND CON		K265S	ER Programs	Linear	240.00	Hours
	Factors	160	hours	1		Procurement Buver		1.5	months		
	750	STRAIGHT TIME BASE		S020	ENVIRONMENTAL SCIENTISTS		R100S	RMRS Salaried	Linear	160.00	Hours
	Factors	160	Hours	1		Environmental Scientist					

Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	4,570.42	Dollars
	Factors 4570.42 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	1,723.66	Dollars
	Factors 1723.66 Dollars									

Activity ID: 1GGE161588 Description: 903 Pad Lip & Am Mobe & Site Preparation

Cost Risk 3 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Site Resources	1.00	each	EE	4,160	4,160	132,243	0	0	132,243	45,756	177,999
20	903 Lip and Am Mob Subs & Supplies	1.00	each	EE	0	0	0	195,437	0	195,437	0	195,437
30	Leases	1.00	each	EE	0	0	0	57,380	0	57,380	0	57,380
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	121,908	121,908	0	121,908
Total for Activity 1GGE161588:						4,160	132,243	252,817	121,908	506,967	45,756	552,723

Line Item 10 - Site Resources

BOE	Estimator's Experience - Estimator interviewed T-1 Project Supervisor to determine site support requirements during T-1 remediation in weather structure Experience Item Desc - T-1 Remediation costs Breakdown of Cost Data: Item - Number of Site personnel support Units - hours per month Unit Cost - 4,160 hours Unit Cost Adjustment factor - Revised Unit Cost - Basis for adjustment - Labor resources required to remediate Lip Area and Americium Zone 1/2 those required for 903 Pad Remediation (no weather structure, lower contamination levels).
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WBS No: 1GAB0401
Activity ID: 1GGE161588

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

This BOE provides the required site resources to support the mobilization and site preparation for remediation of the 903 Lip area and Americium zone. It is estimated that the following site resource will be required at fulltime (or fraction of); 0.5 Crit Engineer, 0.5 QA, 2 Mangers Oversight, 1 Rad Engineer, 1 Safety, 7 RCTs, 6 D&D Worker, 1 Foreman and 6 D&D workers. The duration of the activity is one month.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E080	NUCLEAR (CRITICALITY) ENGINEER	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	80	hours	0.5	Crit Engineer for AB					
	750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	K244S	Indep Oversight & Quality Assurance	Linear	480.00	Hours
Factors	160	hours	3	Readiness Assors					
	750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K107S	Enq. Envir. Safetv & Quality Programs	Linear	80.00	Hours
Factors	160	Hours	0.5	QA					
	750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	320.00	Hours
Factors	160	Hours	2	Mangers Oversight					
	750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160	Hours	1	Rad Engineer					
	750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	K107S	Enq. Envir. Safetv & Quality Programs	Linear	160.00	Hours
Factors	160	Hours	1	Safetv					
	750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KG10H	Remediation Steelworkers	Linear	1,120.00	Hours
Factors	160	Hours	7	RCTs					
	750	STRAIGHT TIME BASE	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	240.00	Hours
Factors	40	Hours	6	D&D Worker					
	751	OVERTIME BASE & PRE.	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160	hours	1	Foreman					
	751	OVERTIME BASE & PRE.	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hours	1	Forman OT					
	751	OVERTIME BASE & PRE.	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	40	Hours	2	Managers OT					
	751	OVERTIME BASE & PRE.	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hours	1	Rad Enq OT					
	751	OVERTIME BASE & PRE.	T050	RADIATION CONTROL TECHNOLIGI	KG10H	Remediation Steelworkers	Linear	280.00	Hours
Factors	40	Hours	7	RCT Overtime					
	751	OVERTIME BASE & PRE.	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	960.00	Hours
Factors	160	Hours	6	D&D worker					

Line Item 20 - 903 Lip and Am Mob Subs & Supplies

BOE	Estimator's Experience - Estimator interviewed T-1 Project Supervisor to determine subcontractor support requirements during remediation in weather structure Experience Item Desc - T-1 Remediation costs Breakdown of Cost Data: Item - Subcontracted Services Units - Dollars per month Unit Cost - \$211,200 Unit Cost Adjustment factor - Revised Unit Cost - Basis for adjustment - no weather structure, lower contamination levels, 1/2 site resources required to perform remediation activities at 903 Pad. This BOE provides for a Project Manager, Project Supervisor, HSS Specialist, Waste Generator, Field Supervisor, Technician/Runner, a Geologist for one month fulltime with 40 hours of overtime for each for the one month duration of the activity. This BOE also provides for the purchase of the soft side waste packages for packaging waste and the lifting frames for a activity total of \$211,200. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.								
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	95,000.00	Dollars
Factors	380	Dollars	250	Soft sided waste pack					
	A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	14,000.00	Dollars
Factors	7000	Dollars	2	Soft Sided Waste Pack Lifting					

WBS No: 1GAB0401
Activity ID: 1GGE161588

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	69.149.34	Dollars
Factors	73	Dollars	7	subcontractor personnel	1	month	160	hours per month
							0.84576	[SYS 061400] .84576000 - Svstem
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	17.287.33	Dollars
Factors	73	Dollars	7	subcontract personnel	1	month	40	hours OT per month
							0.84576	[SYS 061400] .84576000 - Svstem

Line Item 30 - Leases

BOE	Estimators Experience - Estimator interviewed Trench 1 Field Supervisor to determine equipment leases required to complete T-1 excavation Experience Item Desc - T-1 Equipment Lease Breakdown of Cost Data: Item - Equipment Leases Units - dollars per month Unit Cost - \$57,380 Unit Cost Adjustment factor - Revised Unit Cost - Basis for adjustment - Equipment required for excavation in Lip Area similar to Pad excavation excluding support trailer, toilets, and supplied air compressors. H&S equipment costs are reduced based on outdoor excavation. This BOE provides for the leasing of heavy equipment to be used for the excavation activity. It also provides health and safety equipment leases and lunches for the workers.							
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Resources	Cost Element		Skill		Department	Curve	Quantity	Units
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	10.880.00	Dollars
Factors	17	Dollars	16	Men PPE	2	Suits per Day	20	Days per month
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	14.000.00	Dollars
Factors	14000	Dollars	1	Excavator				
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	9.000.00	Dollars
Factors	9000	Dollars	1	Loader				
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	2.500.00	Dollars
Factors	2500	Dollars	1	Fork Lift				
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	5.000.00	Dollars
Factors	5000	Dollars	1	Water Truck				
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	10.000.00	Dollars
Factors	10000	Dollars	1	H&S equipment				
A5N	FUEL & UTILITIES	0000	NONE	K265S	ER Programs	Linear	2.000.00	Dollars
Factors	2000	Dollars	1	Fuel				
A5R	MISC EXPENSES	0000	NONE	K265S	ER Programs	Linear	4.000.00	Dollars
Factors	8	Dollars	25	Men Lunches	20	days per month		

Line Item SYS - Contingency And Escalation

BOE								
Resources	Cost Element		Skill		Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	88.870.72	Dollars
Factors	88870.7	Dollars						
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	33.037.20	Dollars
Factors	33037.2	Dollars						

Activity ID: 1GGE161590 Description: 903 Pad Lip & Am Zone Readiness Review

Cost Risk 5 Schedule Risk 5

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Site Resources	1.00	each	HC	3.680	3.680	106.587	0	0	106.587	32.377	138.964
20	Subcontract Support/Materials	1.00	each	HC	0	0	0	86.437	0	86.437	0	86.437
30	Leases	1.00	each		0	0	0	57.380	0	57.380	0	57.380
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	58.526	58.526	0	58.526
Total for Activity 1GGE161590:						3.680	106.587	143.817	58.526	308.930	32.377	341.307

Line Item 10 - Site Resources

BOE	Estimator's Experience - Estimator interviewed T-1 Project Supervisor to determine site support requirements during T-1 remediation in weather structure							
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WBS No: 1GAB0401
Activity ID: 1GGE161590

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Experience Item Desc - T-1 Remediation costs

Breakdown of Cost Data:

Item - Number of Site personnel support

Units - hours per month

Unit Cost - 3,680 hours

Unit Cost Adjustment factor -

Revised Unit Cost -

Basis for adjustment - Labor resources required to remediate Lip Area and Americium Zone 1/2 those required for 903 Pad Remediation (no weather structure, lower contamination levels).

This BOE provides the required site resources to support the mobilization and site preparation for remediation of the 903 Lip area and Americium zone. It is estimated that the following site resource will be required at fulltime (or fraction of): 0.5 Crit Engineer, 0.5 QA, 2 Managers Oversight, 1 Rad Engineer, 1 Safety, 7 RCTs, 6 D&D Worker, 1 Foreman and 6 D&D workers. This BOE also provides for three readiness assessors fulltime for this activity. The duration of the activity is one month.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E080	NUCLEAR (CRITICALITY) ENGINEER	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	80 hours	0.5	Crit Engineer for AB					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K107S	Eng. Envir. Safetv & Qualitv Programs	Linear	80.00	Hours
Factors	160 Hours	0.5	QA					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	320.00	Hours
Factors	160 Hours	2	Managers Oversight					
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160 Hours	1	Rad Engineer					
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	K107S	Eng. Envir. Safety & Quality Programs	Linear	160.00	Hours
Factors	160 Hours	1	Safetv					
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KG10H	Remediation Steelworkers	Linear	1,120.00	Hours
Factors	160 Hours	7	RCTs					
750	STRAIGHT TIME BASE	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	240.00	Hours
Factors	40 Hours	6	D&D Worker					
751	OVERTIME BASE & PRE.	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160 hours	1	Foreman					
751	OVERTIME BASE & PRE.	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 hours	1	Forman OT					
751	OVERTIME BASE & PRE.	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	40 Hours	2	Managers OT					
751	OVERTIME BASE & PRE.	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 hours	1	Rad Eng OT					
751	OVERTIME BASE & PRE.	T050	RADIATION CONTROL TECHNOLIGI	KG10H	Remediation Steelworkers	Linear	280.00	Hours
Factors	40 Hours	7	RCT Overtime					
751	OVERTIME BASE & PRE.	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	960.00	Hours
Factors	160 Hours	6	D&D worker					

Line Item 20 - Subcontract Support/Materials

BOE

Estimator's Experience - Estimator interviewed T-1 Project Supervisor to determine subcontractor support requirements during remediation in weather structure

Experience Item Desc - T-1 Remediation costs

Item - Subcontracted Services

Units - Dollars per month

Unit Cost - \$102,200

Unit Cost Adjustment factor -

Revised Unit Cost -

Basis for adjustment - no weather structure, lower contamination levels, 1/2 site resources required to perform remediation activities at 903 Pad.

This BOE provides for a Project Manager, Project Supervisor, HSS Specialist, Waste Generator, Field Supervisor, Technician/Runner, a Geologist for one month fulltime with 40 hours of overtime for each for the one month duration of the activity.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
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WBS No: 1GAB0401
Activity ID: 1GGE161590

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	17.287.33	Dollars
Factors	73	Hours	7	subcontract personnel	1	month	40	hours OT per month
							0.84576	[SYS 061400] .84576000 - Svsstem
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	69.149.34	Dollars
Factors	73	Dollars	7	subcontract personnel	1	month	160	hours per month
							0.84576	[SYS 061400] .84576000 - Svsstem

Line Item 30 - Leases

BOE	Estimators Experience - Estimator interviewed Trench 1 Field Supervisor to determine equipment leases required to complete T-1 excavation Experience Item Desc - T-1 Equipment Lease Breakdown of Cost Data: Breakdown of Cost Data: Item - Equipment Leases Units - dollars per month Unit Cost - \$57,380 Unit Cost Adjustment factor - Revised Unit Cost - Basis for adjustment - Equipment required for excavation in Lip Area and Americium Zone similar to Pad excavation excluding support trailer, toilets, and supplied air compressors. H&S equipment costs are reduced based on outdoor excavation. This BOE provides for the leasing of heavy equipment and fuel to be used for the excavation activity. It also provides health and safety equipment leases and lunches for the workers.
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Resources	Cost Element		Skill		Department	Curve	Quantity	Units
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	10.880.00	Dollars
Factors	17	Dollars	16	Men PPE	2	Suits per Day	20	Days per month
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	14.000.00	Dollars
Factors	14000	Dollars	1	Excavator				
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	9.000.00	Dollars
Factors	9000	Dollars	1	Loader				
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	2.500.00	Dollars
Factors	2500	Dollars	1	Fork Lift				
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	5.000.00	Dollars
Factors	5000	Dollars	1	Water Truck				
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	10.000.00	Dollars
Factors	10000	Dollars	1	H&S equipment				
A5N	FUEL & UTILITIES	0000	NONE	K265S	ER Programs	Linear	2.000.00	Dollars
Factors	2000	Dollars	1	Fuel				
A5R	MISC EXPENSES	0000	NONE	K265S	ER Programs	Linear	4.000.00	Dollars
Factors	8	Dollars	25	Men Lunches	20	days per month		

Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department		Linear	33.263.11	Dollars
	Factors 33263.1 Dollars									
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department		Linear	25.263.33	Dollars
	Factors 25263.3 Dollars									

Activity ID: 1GGE161620 Description: 903 Pad Lip & Americium Zone Remediation

Cost Risk 5 Schedule Risk 5

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Site Resources	4.00	each	EE	3.720	14.880	397.933	0	0	397.933	112.217	510.150
20	Subcontractor Support/Materials	1.00	each	EE	0	0	0	487.027	0	487.027	0	487.027
30	Leases	4.00	each	EE	0	0	0	229.520	0	229.520	0	229.520
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	184.194	184.194	0	184.194
Total for Activity 1GGE161620:						14.880	397.933	716.547	184.194	1,298.673	112.217	1,410.890

WBS No: 1GAB0401
Activity ID: 1GGE161620

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Line Item 10 - Site Resources

BOE

Estimator's Experience - Estimator interviewed T-1 Project Supervisor to determine site support requirements during T-1 remediation in weather structure
Experience Item Desc - T-1 Remediation costs
Breakdown of Cost Data:
Item - Number of Site personnel support
Units - hours per month
Unit Cost - 3,720 hours
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment - Labor resources required to remediate Lip Area and Americium Zone 1/2 those required for 903 Pad Remediation (no weather structure, lower contamination levels).

This BOE provides the required site resources to support the mobilization and site preparation for remediation of the 903 Lip area and Americium zone. It is estimated that the following site resource will be required at fulltime (or fraction of): 0.5 Crit Engineer, 0.5 QA, 2 Mangers Oversight, 1 Rad Engineer, 1 Safety, 7 RCTs, 6 D&D Worker, 1 Foreman and 6 D&D workers. This BOE also provides for three readiness assessors fulltime for this activity. The duration of the activity is four months (3 for excavation one for demobilization and reclamation)..

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E080	NUCLEAR (CRITICALITY) ENGINEER	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	160 hours		0.5 Crit Engineer for AB					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K107S	Eng. Envir. Safetv & Quality Programs	Linear	80.00	Hours
Factors	160 Hours		0.5 QA					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	320.00	Hours
Factors	160 Hours		2 Mangers Oversight					
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160 Hours		1 Rad Engineer					
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	K107S	Eng. Envir. Safetv & Quality Programs	Linear	160.00	Hours
Factors	160 Hours		1 Safetv					
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KG10H	Remediation Steelworkers	Linear	1,120.00	Hours
Factors	160 Hours		7 RCTs					
750	STRAIGHT TIME BASE	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	960.00	Hours
Factors	160 Hours		6 D&D worker					
751	OVERTIME BASE & PRE.	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160 hours		1 Foreman					
751	OVERTIME BASE & PRE.	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 hours		1 Forman OT					
751	OVERTIME BASE & PRE.	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	40 Hours		2 Managers OT					
751	OVERTIME BASE & PRE.	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 hours		1 Rad Eng OT					
751	OVERTIME BASE & PRE.	T050	RADIATION CONTROL TECHNOLIGI	KG10H	Remediation Steelworkers	Linear	280.00	Hours
Factors	40 Hours		7 RCT Overtime					
751	OVERTIME BASE & PRE.	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	240.00	Hours
Factors	40 Hours		6 D&D Worker OT					

Line Item 20 - Subcontractor Support/Materials

BOE

Estimator's Experience - Estimator interviewed T-1 Project Supervisor to determine subcontractor support requirements during remediation in weather structure
Experience Item Desc - T-1 Remediation
Breakdown of Cost Data:
Item - Subcontracted Services
Units - Dollars
Unit Cost - \$550,080
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment - no weather structure, lower contamination levels, 1/2 site resources required to perform remediation activities at 903 Pad.

This BOE provides for a Project Manager, Project Supervisor, HSS Specialist, Waste Generator, Field Supervisor, Technician/Runner, a Geologist for one month fulltime with 40 hours of overtime for each for the one month duration of the activity.

WBS No: 1GAB0401
Activity ID: 1GGE161620

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Starts In FY *

The BOE also provides for backfill soil materials and topsoil/revegetation materials and misc. supplies.
This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	6.000.00	Dollars
Factors	10 Dollars		600 Backfill					
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	35.280.00	Dollars
Factors	21000 Dollars		1.68 Topsoil + labor					
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	100.000.00	Dollars
Factors	100000 Dollars		1 Supplies					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	69.149.34	Dollars
Factors	73 Dollars		7 subcontract personnel	4 months		40 hours per month	0.84576 [SYS 061400] .84576000 - Svsstem	
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	276.597.30	Dollars
Factors	73 Dollars		7 subcontract personnel	4 months		160 hours per month	0.84576 [SYS 061400] .84576000 - Svsstem	

Line Item 30 - Leases

BOE

Estimators Experience - Estimator interviewed Trench 1 Field Supervisor to determine equipment leases required to complete T-1 excavation
Experience Item Desc - T-1 Equipment Lease
Breakdown of Cost Data:
Breakdown of Cost Data:
Item - Equipment Leases
Units - dollars per month
Unit Cost - \$57,380 (activity duration is 4 months)
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment - Equipment required for excavation in Lip Area similar to Pad excavation excluding support trailer, toilets, and supplied air compressors. H&S equipment costs are reduced based on outdoor excavation.

This BOE provides for the leasing of heavy equipment to be used for the excavation activity. It also provides health and safety equipment leases and lunches for the workers.

The excavation is estimated at a 3 month duration with 1 additional month for demobilization for an active duration of 4 months.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	10.880.00	Dollars
Factors	17 Dollars		16 Men PPE	2 Suits per Day		20 Days per month		
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	2.500.00	Dollars
Factors	2500 Dollars		1 Fork Lift					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	9.000.00	Dollars
Factors	9000 Dollars		1 Loader					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	5.000.00	Dollars
Factors	5000 Dollars		1 Water Truck					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	10.000.00	Dollars
Factors	10000 Dollars		1 H&S equipment					
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	14.000.00	Dollars
Factors	14000 Dollars		1 Excavator					
A5N	FUEL & UTILITIES	0000	NONE	K265S	ER Programs	Linear	2.000.00	Dollars
Factors	2000 Dollars		1 Fuel					
A5R	MISC EXPENSES	0000	NONE	K265S	ER Programs	Linear	4.000.00	Dollars
Factors	8 Dollars		25 Men Lunches	20 days per month				

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
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WBS No: 1GAB0401
Activity ID: 1GGE161620

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	66,411.05	Dollars
Factors	66411.1 Dollars							
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	117,782.80	Dollars
Factors	117783 Dollars							

Activity ID: 1GGE161655 Description: East Firing Range Remediation

Cost Risk 5 Schedule Risk 5

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	East Firing Range Site Resources	3.00	each	HC	3,720	11,160	324,953	0	0	324,953	92,495	417,447
20	East Firing Range Rem Subs & Supplies	1.00	each	HC	0	0	0	448,310	0	448,310	0	448,310
30	Leases	3.00	each		0	0	0	169,740	0	169,740	0	169,740
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	194,047	194,047	0	194,047
Total for Activity 1GGE161655:						11,160	324,953	618,050	194,047	1,137,050	92,495	1,229,544

Line Item 10 - East Firing Range Site Resources

BOE	<p>Estimator's Experience - Estimator interviewed T-1 Project Supervisor to determine site support requirements during T-1 remediation in weather structure</p> <p>Experience Item Desc - T-1 Remediation costs</p> <p>Breakdown of Cost Data:</p> <p>Item - Number of Site personnel support</p> <p>Units - hours per month</p> <p>Unit Cost - 3,720 hours (3 month activity duration)</p> <p>Unit Cost Adjustment factor -</p> <p>Revised Unit Cost -</p> <p>Basis for adjustment - Labor resources required to remediate Lip Area and Americium Zone 1/2 those required for 903 Pad Remediation (no weather structure, lower contamination levels).</p> <p>This BOE provides the required site resources to support the mobilization and site preparation for remediation of the 903 Lip area and Americium zone. It is estimated that the following site resource will be required at fulltime (or fraction of); 0.5 Crit Engineer, 0.5 QA, 2 Mangers Oversight, 1 Rad Engineer, 1 Safety, 7 RCTs, 6 D&D Worker, 1 Foreman and 6 D&D workers. The duration of the activity is three months (2 for excavation one for demobilization and reclamation).</p>
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Resources	Cost Element		Skill		Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E080	NUCLEAR (CRITICALITY) ENGINEER	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	160	hours	0.5	Crit Engineer for AB				
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K107S	Eno. Envir. Safetv & Quality Programs	Linear	80.00	Hours
Factors	160	Hours	0.5	QA				
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	320.00	Hours
Factors	160	Hours	2	Mangers Oversight				
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160	Hours	1	Rad Engineer				
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	K107S	Eno. Envir. Safetv & Quality Programs	Linear	160.00	Hours
Factors	160	Hours	1	Safetv				
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLOGI	KG10H	Remediation Steelworkers	Linear	1,120.00	Hours
Factors	160	Hours	7	RCTs				
750	STRAIGHT TIME BASE	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	240.00	Hours
Factors	40	Hours	6	D&D Worker OT				
751	OVERTIME BASE & PRE.	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hours	1	Forman OT				
751	OVERTIME BASE & PRE.	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160	hours	1	Foreman				
751	OVERTIME BASE & PRE.	M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	40	Hours	2	Managers OT				
751	OVERTIME BASE & PRE.	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hours	1	Rad Enq OT				
751	OVERTIME BASE & PRE.	T050	RADIATION CONTROL TECHNOLOGI	KG10H	Remediation Steelworkers	Linear	280.00	Hours
Factors	40	Hours	7	RCT Overtime				
751	OVERTIME BASE & PRE.	T060	D&D HAZ REDUC TECH / RISK RED	KG10H	Remediation Steelworkers	Linear	960.00	Hours
Factors	160	Hours	6	D&D worker				

WBS No: 1GAB0401
Activity ID: 1GGE161655

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Line Item 20 - East Firing Range Rem Subs & Supplies

BOE	Estimator's Experience - Estimator interviewed T-1 Project Supervisor to determine subcontractor support requirements during remediation in weather structure									
	Experience Item Desc - T-1 Remediation costs									
	Breakdown of Cost Data:									
	Item - Subcontracted Services									
	Units - Dollars per month									
	Unit Cost - \$495,600									
	Unit Cost Adjustment factor -									
	Revised Unit Cost -									
	Basis for adjustment - no weather structure, lower contamination levels, 1/2 site resources required to perform remediation activities at 903 Pad.									
	This BOE provides for a Project Manager, Project Supervisor, HSS Specialist, Waste Generator, Field Supervisor, Technician/Runner, a Geologist for one month fulltime with 40 hours of overtime for each for the three month duration of the activity.									
The BOE also provides for backfill topsoil/revegetation materials for 3 acres, misc. supplies (50K), and waste packages.										
Total activiy costs are \$495,600.										
This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.										

Resources		Cost Element		Skill		Department		Curve	Quantity	Units
A5C	SUPPLIES	0000	NONE			K265S	ER Programs	Linear	76.000.00	Dollars
Factors	380	Dollars		200	Soft Sided waste containers					
A5C	SUPPLIES	0000	NONE			K265S	ER Programs	Linear	63.000.00	Dollars
Factors	21000	Dollars		3	acre Topsoil + labor					
A5C	SUPPLIES	0000	NONE			K265S	ER Programs	Linear	50.000.00	Dollars
Factors	50000	Dollars		1	Supplies					
A5H	SUBCONTRACTED SRVS	0000	NONE			K265S	ER Programs	Linear	51.862.00	Dollars
Factors	73	Dollars		7	subcontract personnel	3	months	40	hours per month	
								0.84576	ISYS 0614001.84576000 - Svstem	
A5H	SUBCONTRACTED SRVS	0000	NONE			K265S	ER Programs	Linear	207.448.00	Dollars
Factors	73	Dollars		7	subcontract personnel	3	months	160	hours per month	
								0.84576	ISYS 0614001.84576000 - Svstem	

Line Item 30 - Leases

BOE	Estimators Experience - Estimator interviewed Trench 1 Field Supervisor to determine equipment leases required to complete T-1 excavation									
	Experience Item Desc - T-1 Equipment Lease									
	Breakdown of Cost Data:									
	Item - Equipment Leases									
	Units - dollars per month									
	Unit Cost - \$56,580 (3 month activity duration)									
	Unit Cost Adjustment factor -									
	Revised Unit Cost -									
	Basis for adjustment - Equipment required for excavation in Lip Area similar to Pad excavation excluding support trailer, toilets, and supplied air compressors. H&S equipment costs are reduced based on outdoor excavation.									
	This BOE provides for the leasing of heavy equipment to be used for the excavation activity. It also provides health and safety equipment leases and lunches for the workers.									
The excavation is estimated at a 2 month duration with 1 additional month for demobilization for an activity duration of 3 months.										

Resources		Cost Element		Skill		Department		Curve	Quantity	Units
A5C	SUPPLIES	0000	NONE			K265S	ER Programs	Linear	10.880.00	Dollars
Factors	17	Dollars		16	Men PPE	2	Suits per Day	20	Days per month	
A5L	RENTALS	0000	NONE			K265S	ER Programs	Linear	2.500.00	Dollars
Factors	2500	Dollars		1	Fork Lift					
A5L	RENTALS	0000	NONE			K265S	ER Programs	Linear	5.000.00	Dollars
Factors	5000	Dollars		1	Water Truck					
A5L	RENTALS	0000	NONE			K265S	ER Programs	Linear	9.000.00	Dollars
Factors	9000	Dollars		1	Loader					

WBS No: 1GAB0401
Activity ID: 1GGE161655

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A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	10,000.00	Dollars
Factors	10000	Dollars	1	H&S equipment				
A5L	RENTALS	0000	NONE	K265S	ER Programs	Linear	14,000.00	Dollars
Factors	14000	Dollars	1	Excavator				
A5N	FUEL & UTILITIES	0000	NONE	K265S	ER Programs	Linear	2,000.00	Dollars
Factors	2000	Dollars	1	Fuel				
A5R	MISC EXPENSES	0000	NONE	K265S	ER Programs	Linear	3,200.00	Dollars
Factors	8	Dollars	20	Men Lunches	20	days per month		

Line Item SYS - Contingency And Escalation

BOE

Resources

	Cost Element		Skill		Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	92,134.30	Dollars
Factors	92134.3	Dollars						
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	101,912.70	Dollars
Factors	101913	Dollars						

Activity ID: 1GGE162001 Description: 903 Pad Project Support FY00

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Project Support	1.00	each	HC	260	260	7,909	0	0	7,909	3,859	11,768
Total for Activity 1GGE162001:						260	7,909	0	0	7,909	3,859	11,768

Line Item 10 - Project Support

BOE

Estimator's Experience - Estimator has performed project responsibilities on 903 Pad Remediation Project for two years
Experience Item Desc - 903 Pad Remediation Project Management
Breakdown of Cost Data:
Item -
Units - Lot
Unit Cost - Labor hours 260

Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment

Resources

	Cost Element		Skill		Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	hrs						
750	STRAIGHT TIME BASE	P170	OTHER ADMINISTRATIVE & PROFE	R100S	RMRS Salaried	Linear	220.00	Hours
Factors	220	hrs						

Activity ID: 1GGE162005 Description: 903 Pad Project Support FY01

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Project Support	1.00	each	HC	2,800	2,800	113,699	39,582	0	153,281	54,234	207,515
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	11,002	11,002	0	11,002
Total for Activity 1GGE162005:						2,800	113,699	39,582	11,002	164,282	54,234	218,517

Line Item 10 - Project Support

BOE

Estimator's Experience - Estimator has performed project responsibilities on 903 Pad Remediation Project for two years
Experience Item Desc - 903 Pad remediation Project Management
Breakdown of Cost Data:
Item -Labor hours, subcontracted services
Units - Hours
Unit Cost - Labor hours 2,800, Subcontracted Services \$46,800
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

WBS No: 1GAB0401
Activity ID: 1GGE162005

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project
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Resources		Cost Element	Skill	Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	G010 ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	900.00	Hours
	<i>Factors</i> 900 hours							
	750	STRAIGHT TIME BASE	M020 MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	1.800.00	Hours
	<i>Factors</i> 1800 hrs							
	750	STRAIGHT TIME BASE	P060 COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried	Linear	100.00	Hours
	<i>Factors</i> 100 Hours							
	A5H	SUBCONTRACTED SRVS	P070 COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	39.581.57	Dollars
	<i>Factors</i> 46800 dollars							

0.84576 [SYS 061400] .84576000 - Svstem

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000 NONE	ZDEPT	No Department	Linear	6.637.97	Dollars
	<i>Factors</i> 6637.97 Dollars							
	ESC	ESCALATION	0000 NONE	ZDEPT	No Department	Linear	4.363.58	Dollars
	<i>Factors</i> 4363.58 Dollars							

Activity ID: 1GGE162010 Description: 903 Pad Project Support FY02

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Project Support	1.00	each	HC	2.800	2.800	113.699	39.582	0	153.281	40.136	193.416
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	28.909	28.909	0	28.909
Total for Activity 1GGE162010:						2.800	113.699	39.582	28.909	182.189	40.136	222.325

Line Item 10 - Project Support

BOE

Estimator's Experience - Estimator has performed project responsibilities on 903 Pad Remediation Project for two years
Experience Item Desc - 903 Pad remediation Project Management
Breakdown of Cost Data:
Item -
Units -Labor Hours, Subcontract dollars
Unit Cost - Labor hours 2,800, Subcontracted Services \$46,800
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment

The BOE provides for a fulltime project manager, halftime administrative assistant, halftime subcontract project controls personnel, and 100 hours for a computer systems personnel.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	G010 ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	900.00	Hours
	<i>Factors</i> 900 hours Administrative Assist							
	750	STRAIGHT TIME BASE	M020 MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	1.800.00	Hours
	<i>Factors</i> 1800 hrs project manager							
	750	STRAIGHT TIME BASE	P060 COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried	Linear	100.00	Hours
	<i>Factors</i> 100 Hours Computer svstem operator							
	A5H	SUBCONTRACTED SRVS	P070 COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	39.581.57	Dollars
	<i>Factors</i> 46800 dollars project controls							

0.84576 [SYS 061400] .84576000 - Svstem

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000 NONE	ZDEPT	No Department	Linear	19.870.01	Dollars
	<i>Factors</i> 19870.0 Dollars							

WBS No: 1GAB0401
Activity ID: 1GGE162010

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	9.038.62	Dollars
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Factors 9038.62 Dollars

Activity ID: 1GGE162015 Description: 903 Pad Project Support FY03

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Project Support	1.00	each	HC	2.800	2.800	113.699	39.582	0	153.281	39.340	192.620
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	53.403	53.403	0	53.403
Total for Activity 1GGE162015:						2.800	113.699	39.582	53.403	206.684	39.340	246.024

Line Item 10 - Project Support

BOE

Estimator's Experience - Estimator has performed project responsibilities on 903 Pad Remediation Project for two years
Experience Item Desc - 903 Pad remediation Project Management
Breakdown of Cost Data:
Item -
Units -Labor Hours, Subcontract dollars
Unit Cost - Labor hours 2,800, Subcontracted Services \$46,800
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment

The BOE provides for a fulltime project manager, halftime administrative assistant, halftime subcontract project controls personnel, and 100 hours for computer systems personnel.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
750 STRAIGHT TIME BASE	G010 ADMINISTRATIVE ASSISTANTS	R100S RMRS Salaried	Linear	900.00	Hours
Factors 900 hours					
750 STRAIGHT TIME BASE	M020 MANAGERS (GRADE 69 - 72)	R100S RMRS Salaried	Linear	1,800.00	Hours
Factors 1800 hrs					
750 STRAIGHT TIME BASE	P060 COMPUTER SYSTEMS ANALYSTS	R100S RMRS Salaried	Linear	100.00	Hours
Factors 100 Hours					
A5H SUBCONTRACTED SRVS	P070 COST ESTIMATORS PLANNERS AN	K265S ER Programs	Linear	39.581.57	Dollars
Factors 46800 dollars					

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	38.632.24	Dollars
Factors 38632.2 Dollars					
ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	14.771.15	Dollars
Factors 14771.2 Dollars					

Activity ID: 1GGE162025 Description: 903 Pad Project Support FY04

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Project Support	1.00	each	HC	2.800	2.800	113.699	39.582	0	153.281	35.466	188.747
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	60.077	60.077	0	60.077
Total for Activity 1GGE162025:						2.800	113.699	39.582	60.077	213.358	35.466	248.824

Line Item 10 - Project Support

BOE

Estimator's Experience - Estimator has performed project responsibilities on 903 Pad Remediation Project for two years
Experience Item Desc - 903 Pad remediation Project Management
Breakdown of Cost Data:
Item -
Units -Labor Hours, Subcontract dollars
Unit Cost - Labor hours 2,800, Subcontracted Services \$46,800
Unit Cost Adjustment factor -
Revised Unit Cost -

WBS No: 1GAB0401
Activity ID: 1GGE162025

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Basis for adjustment

The BOE provides for a fulltime project manager, halftime administrative assistant, halftime subcontract project controls personnel, and 100 hours for computer systems personnel.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	900.00	Hours
Factors 900 hours								
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	1,800.00	Hours
Factors 1800 hrs								
750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried	Linear	100.00	Hours
Factors 100 Hours								
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	39,581.57	Dollars
Factors 46800 dollars								

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	36,803.96	Dollars
Factors 36804 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	23,273.41	Dollars
Factors 23273.4 Dollars								

WBS No: 1GAB0A01 Title: Group 000-5 (Present Landfill)

Activity ID: 1GCP100000 Description: Decision Document Preparation - IHSS Grp 000-5

Cost Risk 3 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	DOCUMENT PREPARATION	1.00	each	EE	800	800	42,760	143,779	0	186,539	15,094	201,633
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	30,777	30,777	0	30,777
Total for Activity 1GCP100000:						800	42,760	143,779	30,777	217,316	15,094	232,411

Line Item 0100 - DOCUMENT PREPARATION

BOE

Estimators Experience - Experience with similar Environmental Restoration project work scope
Experience Item Desc - PO# ASC221460BK, Task# 4.7 with S.M. Stoller

Breakdown of Cost Data:

Item - Decision Document
Units - lot
Unit Cost - 800 hrs; \$170000 Sub/c
Unit Cost Adjustment factor - none
Revised Unit Cost - none
Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	K265S	ER Programs	Linear	800.00	Hours
Factors 800 HRS								
A5H	SUBCONTRACTED SRVS	E050	ENVIRONMENTAL ENGINEERS	K265S	ER Programs	Linear	143,779.20	Dollars
Factors 170000 SUB/C DOLLARS								

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
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WBS No: 1GAB0A01
Activity ID: 1GCP100000

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	21,354.52	Dollars
Factors 21354.5 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	9,422.62	Dollars
Factors 9422.62 Dollars								

Activity ID: 1GCP100010 Description: Project Scoping & Conceptual Cap Design Prep

Cost Risk 1 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	DESIGN	1.00	each	EE	2,560	2,560	92,278	0	0	92,278	32,574	124,853
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	18,661	18,661	0	18,661
Total for Activity 1GCP100010:						2,560	92,278	0	18,661	110,939	32,574	143,514

Line Item 0100 - DESIGN

BOE	Estimators Experience - Experience with similar Environmental Restoration project work scope Experience Item Desc - Timberline estimate #EP1000-3C for the OU-7 Landfill Breakdown of Cost Data: Item - Project Scope / Concept Design Units - hrs Unit Cost - 2650 Unit Cost Adjustment factor - none Revised Unit Cost - none Basis for adjustment - none
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E020	CIVIL ENGINEERS	K265S	ER Programs	Linear	1,560.00	Hours
	Factors 1560 HRS								
	750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	K265S	ER Programs	Linear	1,000.00	Hours
Factors 1000 HRS									

Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	12,826.34	Dollars
	Factors 12826.3 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	5,834.55	Dollars
	Factors 5834.55 Dollars									

Activity ID: 1GCP100050 Description: Title II/Title III Design

Cost Risk 1 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	DESIGN OF CAP	1.00	each	EE	0	0	0	328,689	0	328,689	0	328,689
0200	PROJECT MGMT	1.00	each	EE	1,610	1,610	74,716	0	0	74,716	22,841	97,557
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	84,437	84,437	0	84,437
Total for Activity 1GCP100050:						1,610	74,716	328,689	84,437	487,842	22,841	510,683

Line Item 0100 - DESIGN OF CAP

BOE	Estimators Experience - Experience with similar Environmental Restoration project work scope Experience Item Desc - Timberline estimate #111111-3A for the OU-7 Landfill Breakdown of Cost Data: Item - Design Units - lot Unit Cost - \$388,632 Unit Cost Adjustment factor - none Revised Unit Cost - none Basis for adjustment - none This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
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Project	Baseline	Dev
WBS Filter	1GAB	
Activity Filter	*	

Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	A5H	SUBCONTRACTED SRVS		0000	NONE	K265S	ER Programs	Linear	125.341.60	Dollars
Factors	2280	hours		65	\$/hr.					
									0.84576	ISYS 0614001.84576000 - Svstem
A5H	SUBCONTRACTED SRVS		E050	ENVIRONMENTAL ENGINEERS		K265S	ER Programs	Linear	171.520.10	Dollars
Factors	3120	Hours		65	\$/hr.					
									0.84576	ISYS 0614001.84576000 - Svstem
A5H	SUBCONTRACTED SRVS		G010	ADMINISTRATIVE ASSISTANTS		K265S	ER Programs	Linear	8.119.30	Dollars
Factors	384	HRS - SECR/CLERK SUPPORT		25	\$/hr.					
									0.84576	ISYS 0614001.84576000 - Svstem
A5H	SUBCONTRACTED SRVS		M020	MANAGERS (GRADE 69 - 72)		K265S	ER Programs	Linear	23.708.34	Dollars
Factors	384	Hours		73	\$/hr.					
									0.84576	ISYS 0614001.84576000 - Svstem

Line Item 0200 - PROJECT MGMT

BOE	<p>Estimators Experience - Experience with similar Environmental Restoration project work scope</p> <p>Experience Item Desc - Timberline estimate # EP1000-3C for the OU-7 Landfill</p> <p>Breakdown of Cost Data:</p> <p>Item - Project Mgmt</p> <p>Units - lot</p> <p>Unit Cost - 1610 hrs;</p> <p>Unit Cost Adjustment factor - none</p> <p>Revised Unit Cost - none</p> <p>Basis for adjustment - none</p>
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	160.00	Hours
	Factors	160 HRS							
	750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	1,250.00	Hours
	Factors	1250 HRS							
	750	STRAIGHT TIME BASE	P170	OTHER ADMINISTRATIVE & PROFF	R100S	RMRS Salaried	Linear	200.00	Hours
	Factors	200 Hours							

Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	46,583.25	Dollars
	Factors 46583.3 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	37,853.27	Dollars
	Factors 37853.3 Dollars									

Activity ID: 1GCP100060

Description: Procure Design & Build Subcontract

<i>Cost Risk</i>	1	<i>Schedule Risk</i>	1
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Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	PROCUREMENT SUPPORT	1.00	each	EE	410	410	11,928	0	0	11,928	4,127	16,055
SYS	Contingency And Escalation	1.00	each	EE	0	0	0	0	4,451	4,451	0	4,451
Total for Activity 1GCP100060:						410	11,928	0	4,451	16,379	4,127	20,506

Line Item 0100 - PROCUREMENT SUPPORT

BOE	Estimators Experience - Experience with similar Environmental Restoration project work scope
	Experience Item Desc - Experience from T3/T4 project
	Breakdown of Cost Data:
	Item - Procurement
	Units - lot
	Unit Cost - 250 hrs; 160 hrs. KH Procurement
	Unit Cost Adjustment factor - none

WBS No: 1GAB0A01
Activity ID: 1GCP100060

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter * Starts In FY *

Revised Unit Cost - none
Basis for adjustment - none

Resources		Cost Element	Skill	Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	250.00	Hours
Factors		250	HRS					
750	STRAIGHT TIME BASE	P030	BUYERS PROCUREMENT AND CON	K265S	ER Programs	Linear	160.00	Hours
Factors		160	Hrs					

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	3,219.92	Dollars
Factors		3219.92	Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1,231.15	Dollars
Factors		1231.15	Dollars					

Activity ID: 1GCP100070 Description: OU7 Cap Construction

Cost Risk 3 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0200	Project Mgmt Support	1.00	each	EE	3.433	3.433	151.282	0	0	151.282	50.224	201.507
0250	Construction Management Support	1.00	ls	EE	4.954	4.954	174.896	0	0	174.896	58.064	232.960
LFEAER2210	Provide Fixed Price Contractor Support	1.00	ls	EE	0	0	0	705.070	0	705.070	0	705.070
LFEAER2220	Provide QA/QC	1.00	ls	EE	0	0	0	286.296	0	286.296	0	286.296
LFEAER2275	Project Setup/Trailer/ Road/Water/Traffic Con	1.00	each	EE	0	0	0	784.256	0	784.256	0	784.256
LFEAER2300	Clear & Grub	31.00	ea	TP	0	0	0	16.254	0	16.254	0	16.254
LFEAER2301	Geocomposite Layer - Upper and Lower	49.460.00	sf	EE	0	0	0	552.170	0	552.170	0	552.170
LFEAER2302	Install Gas Collection System	1.00	ea	EE	0	0	0	169.152	0	169.152	0	169.152
LFEAER2305	Prepare Existing Grade	24.990.00	cv	TP	0	0	0	35.296	0	35.296	0	35.296
LFEAER2310	Biota Layer 2" - 8" Diameter Rubble	74.970.00	cv	TP	0	0	0	1,694.035	0	1,694.035	0	1,694.035
LFEAER2315	Geotextile Fabric	49.460.00	sf	TP	0	0	0	643.476	0	643.476	0	643.476
LFEAER2330	Earthwork/Common Borrow	10.770.00	cv	TP	0	0	0	2,826.967	0	2,826.967	0	2,826.967
LFEAER2335	Earthwork/Engineered Fill	24.950.00	cv	TP	0	0	0	1,778.556	0	1,778.556	0	1,778.556
LFEAER2340	Provide Landscaping	22.829.00	sv	TP	0	0	0	297.767	0	297.767	0	297.767
LFEAER2345	Place Top Soil	49.980.00	cv	TP	0	0	0	815.832	0	815.832	0	815.832
LFEAER2350	Clean Out Old Ditch	770.00	cv	EE	0	0	0	3,132	0	3,132	0	3,132
LFEAER2360	Repair/Install New Slurry Wall	46.405.00	sf	EE	0	0	0	893.092	0	893.092	0	893.092
LFEAER2370	Weather Allowance/Show-Up Time	1.00	ls	EE	0	0	0	53.947	0	53.947	0	53.947
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	5,088.317	5,088.317	0	5,088.317
Total for Activity 1GCP100070:						8.387	326.178	11,555.298	5,088.317	16,969.793	108.288	17,078.081

Line Item 0200 - Project Mgmt Support

BOE

This estimate is based on estimator judgement, historical data, and commercial databases from similar type work.
For more complete detail refer to Timberline estimate No. EP1000-3C for the OU-7 Landfill Cover

Resources		Cost Element	Skill	Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	G040	SECRETARIES	K265S	ER Programs	Linear	384.00	Hours
Factors		384	Hours					
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	K265S	ER Programs	Linear	384.00	Hours
Factors		384	Hours					
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	1,920.00	Hours
Factors		1920	HRS					
750	STRAIGHT TIME BASE	P070	COST ESTIMATORS,PLANNERS,AN	K265S	ER Programs	Linear	745.00	Hours
Factors		745	Hours					

Line Item 0250 - Construction Management Support

BOE

This estimate is based on estimator judgement, historical data, and commercial databases from similar type work.

WBS No: 1GAB0A01
Activity ID: 1GCP100070

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

For more complete detail refer to Timberline estimate No. EP1000-3C for the OU-7 Present Landfill Cover under Typical Construction Management and Non Typical Construction Management

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K265S	ER Programs	Linear	1,800.00	Hours
	Factors	1800	Hours						
	750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K265S	ER Programs	Linear	240.00	Hours
	Factors	240	Hours						
	750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	K265S	ER Programs	Linear	244.00	Hours
	Factors	244	Hours						
	750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	730.00	Hours
	Factors	730	Hours						
	750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	K265S	ER Programs	Linear	80.00	Hours
	Factors	80	Hours						
	750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	K265S	ER Programs	Linear	1,800.00	Hours
	Factors	1800	Hours						
	750	STRAIGHT TIME BASE	P150	TRAINERS	K265S	ER Programs	Linear	60.00	Hours
	Factors	60	Hours						

Line Item LFEAER2210 - Provide Fixed Price Contractor Support

BOE	<p>BOE is correct. Line item will adjust through change control to reflect correct costs. Total line item costs = \$1,385.886</p> <p>Estimators Experience - Experience with similar Environmental Restoration project work scope Experience Item Desc - Timberline estimate #EP1000-3C for the OU-7 Landfill</p> <p>Breakdown of Cost Data:</p> <p>Item - Construction Support</p> <p>Unit Cost Adjustment factor - none Revised Unit Cost - none Basis for adjustment - none</p> <p>Project Manager SO 2249hrs x \$83.00 = \$186,667</p> <p>Superintendent SO 40hrs/wk x 4.33wk/mo = 173hrs/mo x 13 months = 2249hrs x \$57.00 = \$128,193</p> <p>Secretary Support 1.00 ls 570 mh x \$35 = \$19,950</p> <p>Submittals 1.00 ls 40mh x \$83.00 = \$3320</p> <p>Scheduling 1.00 ls 228 mh x \$57.00 = \$12,996</p> <p>Estimating 1.00 ls 357 mh x \$57 = \$20,349</p> <p>Procurement 1.00 ls 240 mh x \$57 = \$13,680</p> <p>Action Item Log 1.00 ls 285 mh x \$57 = \$16245</p> <p>Surveyor</p>
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WBS No: 1GAB0A01
Activity ID: 1GCP100070

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

SO
4.33wks/month x 40hrs/wk = 347hrs/mo x 11 month = 3817 hrs x \$25.00 = \$95,387
Material \$200/mo x 11 Months = \$2200, Equipment \$283/mo x 11 months = \$3113
Total \$95,387+2200+3113= \$100,700

Health and Safety Compliance/Health & Safety Plan

SO
1.00 ls = 2280 mh x \$69.00 = \$157,320

Badging

1.00 ls = 72 mh x \$25.00 = \$1799 plus equipment \$50.00 total \$1849

Training

1.00 ls = 720 mh x \$25.00 = \$17,993

As Built Drawings

SO
1.00 ls = 40 mh x \$57.00 = \$2280

Mobilization/Demob

SO
36 items of equipment 36 items x 16hrs = 576 hrs x \$24.55/hr = \$14,141
Equip Price 1200 Equipment Amt. 43,200 Total - \$57341

Equipment Allowance

40 wks x 80 = 3200 mhrs x \$25 = \$80,000
Equipment Price \$3120 x 40 = \$124,800 Total \$204800

Office/Power & Phones to trailers/

13 months x \$1000/month = \$13000
1.00 ls = 48 mh x \$33.94=\$1629, Material & Equipment \$2400 - Total \$4,029
1.00 ls = 24 mn x \$33.94=\$815, Material & Equipment \$1200 - Total \$2,015

Pre-evolution meeting

1.00 ls 1026 mh x \$24.99=\$25,640

Portable Toilet

13 mo x 3 ea x \$39/mo, Material \$135, Total = \$5265

Pickup Trucks/Flat Bed Truck

(5 trucks) 285wks x \$319 = \$90,915
57 wks x \$521 = \$29,697

Water/Generator

57 wks x \$50= \$2850
57 wks x \$145= \$8265

Parts Van (2ea)

114 wks x \$75 = \$8550

Phones/Pagers

57 wks x \$50 = \$2850

Sales Tax

1.00 ls 3.8% of Materials \$249,127

This estimate is based on estimator judgement and historical data from similar type work.

For more complete detail refer to Timberline estimate No. EP1000-3C.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
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WBS No: 1GAB0A01
Activity ID: 1GCP100070

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project
WBS Filter
Activity Filter
Baseline Devl
1GAB
*

Starts In FY *

A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	705.069.50	Dollars
Factors 833652 Dollars								

0.84576 [SYS 061400] .84576000 - System

Line Item LFEAER2220 - Provide QA/QC

BOE

Estimators Experience - Experience with similar Environmental Restoration project work scope
Experience Item Desc - Timberline estimate #EP1000-3C for the OU-7 Landfill

Breakdown of Cost Data:

Item - QA/QC

Unit Cost Adjustment factor - none
Revised Unit Cost - none
Basis for adjustment - none

SO

4.33wks/month x 80hrs/wk = 346 hrs/mo x13 months = 4498 x \$69.00 = \$310,362
Material 2165 x 13 months = \$28,145, Total - \$338,507

This estimate is based on estimator judgement and historical data from similar type work.

For more complete detail refer to Timberline estimate #EP1000-3C for the OU-7 Landfill.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	286.295.70	Dollars
Factors 338507 Dollars								

0.84576 [SYS 061400] .84576000 - System

Line Item LFEAER2275 - Project Setup/Trailer/ Road/Water/Traffic Con

BOE

SEE BELOW FOR THE FOLLOWING TEMPLATE INFORMATION

Trade Publication - Publication Date - Volume/Page - Trade Pub. Item Desc - Breakdown of Trade Pub. Cost Data: Unit Cost Adjustment factor - none - Revised
Unit Cost - none - Basis for adjustment - none

Contractor Yard

Set Up Yard

1.00 ls 64 mh x \$25=\$1600 Equipment Price \$346 Total Cost - \$1946

Office Trailer

1.00 ls 32 mh x \$25=\$800 Equipment Price \$173 Total Cost - \$973

Parts Van

1.00 ls 64 mh x \$25=\$1600 Equipment Price \$346 Total Cost - \$1946

Gravel Yard & Road to Yard

1.00 ls 440 mh x \$25=\$11000 Equip Price \$1397 Material Price \$12,375

Total Cost - \$24,772

Grand Total Cost - \$29,637

Erosion Control

Install Silt Fence

6990 Lf 118.83 mh x 16.92 = \$2011

Materials 6990 x \$0.35= \$2447 Total \$4457

Remove Silt Fence

59.42 x \$16.92= \$1005

Total Cost - \$5462

Haul Road

Haul Road Maintenance

1600 mh x \$25=\$40000

Equipment Price \$2875 x 40=\$115000 Total Cost - \$155000

Dust Control on Haul Road

1600 mh x \$23.82 = \$38,112

Equipment Price 40 x \$3685=\$147400 Total Cost - \$185512

WBS No: 1GAB0A01
Activity ID: 1GCP100070

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Construct Haul Road
1.00 ls 100 mh x \$25= \$2500
Material Price
\$1230
Equipment Price
\$2947 Total Cost - \$6677
Remove Haul Road
1.00 ls 67 mh x \$25= \$1675
Equipment Price
\$1965 Total Cost - \$3640
Grand Total Cost - \$350,811

Traffic Control
Barricades, Cones, Delineators, Signs @ Hwy 93
For 13 months 8996 mh x \$16.92=\$152,212
Materials - 13 mon.x \$3000=\$39000
Flagman
8996 mh x \$16.92=\$152,212
Materials - 13 mon.x \$100= \$1300 Total Cost \$344,724

Water Supply
(3) 4" Dia. Pumps 4800 mh x \$16.92=\$81,216 Equipment 537 x 120 wks =\$64,440
Elevated Water Tower (3) 318 x 120 wks = \$38160
Suction/Discharge Hose, 4" Dia 60 x 120 wks = \$7200
Install/Remove 4" Pump 2 x 24 mh x \$25 = \$1200 Equipment 2 x 112.78 x 3 = \$676
Install/Remove Water Towers 2 x 48 x \$25 = \$2400 Equipment 2 x 225.56 x 3 = \$1354
Grand Total Costs - \$196,646

Activity Total Cost - \$927,280/
This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	784.256.30 Dollars
Factors		927280	Dollars				

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item LFEAER2300 - Clear & Grub

BOE	SEE BELOW FOR THE FOLLOWING TEMPLATE INFORMATION Trade Publication - Publication Date - Volume/Page - Trade Pub. Item Desc - Breakdown of Trade Pub. Cost Data: Unit Cost Adjustment factor - none - Revised Unit Cost - none - Basis for adjustment - none 248 mh x \$25 = \$6200 Equipment Price 31 acres x \$420 = \$13,020 Total Cost - \$19218 \$19218/31acres = \$619.94/acre This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
-----	--

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	524.32 Dollars
Factors		619.935	Dollars				

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item LFEAER2301 - Geocomposite Layer - Upper and Lower

BOE	Geocomposite Layer for Erosion Control (2 layers) This estimate is based on estimator judgement, historical data, and commercial databases from similar type work. For more complete detail refer to Timberline estimate #EP1000-3C for the OU-7 Landfill.
-----	--

WBS No: 1GAB0A01
Activity ID: 1GCP10070

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

1,349,460 sf x .002mh/sf = 2698mh x \$16.92 = \$45,665
1,349,460 sf x .45/sf = \$607,257

Total Costs - \$652,922/1,349,460sf = \$0.4838/sf

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	0.41	Dollars

Factors 0.4838 Dollars

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item LFEAER2302 - Install Gas Collection System

BOE

Gas Monitoring & Collection System
From Stoller Conceptual Cost Estimate: \$200,000

This estimate is based on estimator judgement, historical data, and commercial databases from similar type work.

For more complete detail refer to Timberline estimate #EP1000-3C for the OU-7 Landfill.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	169.152.00	Dollars

Factors 200000 Dollars

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item LFEAER2305 - Prepare Existing Grade

BOE

SEE BELOW FOR THE FOLLOWING TEMPLATE INFORMATION

Trade Publication - Publication Date - Volume/Page - Trade Pub. Item Desc - Breakdown of Trade Pub. Cost Data: Unit Cost Adjustment factor - none - Revised
Unit Cost - none - Basis for adjustment - none

Ripping Existing Soil, 6" deep
Lab: 24,990 cy x .012 hrs/cy x \$24.99/hr = \$7494
Equip: 24,990 cy x \$0.44 = \$10,996

Compaction sheepfoot 6" lifts, 4 passes
Lab: 24,990 cy x .005 hrs/cy x \$24.99 = \$3122
Equip: 24,990 cy x \$0.22/cy = \$5498

Water Truck 3,000 gallon
Lab: 24,990cy x 008hrs/cy x \$24.55 = \$4908
Equipment:24,990 cy x \$0.39/cy = \$9746

Total: \$41,764/24,990 cy = \$1.67/cy

This estimate is based on estimator judgement, historical data, and commercial databases from similar type work.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	1.41	Dollars

Factors 1.67 Dollars

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item LFEAER2310 - Biota Layer 2" - 8" Diameter Rubble

BOE

SEE BELOW FOR THE FOLLOWING TEMPLATE INFORMATION

Trade Publication - Publication Date - Volume/Page - Trade Pub. Item Desc - Breakdown of Trade Pub. Cost Data: Unit Cost Adjustment factor - none - Revised
Unit Cost - none - Basis for adjustment - none

Haul Rubble 20 miles RT 16.5 cy trucks
74,970 cy 5,547.78 mh x \$23.82 = \$132,148

WBS No: 1GAB0A01
Activity ID: 1GCP100070

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Equip Price 5.18 x 74,970 = \$388,345 Total - \$520,493

Rubble Fill
2,324.07 mh x \$25 = \$58,079
Material Price 17.75 x 74,970 = \$1,330,718
Equipment Price 1.25 x 74,970 = \$93,713 Total - \$1,482,509

Grand Total - \$2,003,001
\$2,003,001/74,970cy = \$26.717/cy

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	22.60	Dollars

Factors 26.717 Dollars

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item LFEAER2315 - Geotextile Fabric

BOE

SEE BELOW FOR THE FOLLOWING TEMPLATE INFORMATION

Trade Publication - Publication Date - Volume/Page - Trade Pub. Item Desc - Breakdown of Trade Pub. Cost Data: Unit Cost Adjustment factor - none - Revised
Unit Cost - none - Basis for adjustment - none

Geotextile Fabric
Labor: 1,349,460 sf x .002 hrs/sf x \$16.92 = \$45,666
Materials: 1,349,460 sf x .53 = \$715,213

\$760,878/1,349,460 = \$0.5638

This estimate is based on estimator judgement, historical data, and commercial databases from similar type work.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	0.48	Dollars

Factors 0.5638 Dollars

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item LFEAER2330 - Earthwork/Common Borrow

BOE

SEE BELOW FOR THE FOLLOWING TEMPLATE INFORMATION

Trade Publication - Publication Date - Volume/Page - Trade Pub. Item Desc - Breakdown of Trade Pub. Cost Data: Unit Cost Adjustment factor - none - Revised
Unit Cost - none - Basis for adjustment - none

Common Borrow, Buy &ld at pit, haul 20 Miles rt
Lab: 242,556 cy x .005hrs/cy x \$24.99/hr = \$30,307
Mat: 242,556 cy x \$3.75/cy = \$909,585
Equip: 242,556 cy x \$0.42 = \$101,874

Spread Common Borrow, with dozer, no compaction
Lab: 210,770 cy x .012 hrs/cy x \$24.99 = \$63,206
Equip: 210,770 cy x \$0.84/cy = \$177,047

Haul Common Borrow, 20 mile rt, 16.5 cy Truck
Lab: 242,556 cy x .074hrs/cy x \$24.55/hr = \$440,651
Equip: 242,556 cy x 5.18 = \$1,256,440

Compaction sheepsfoot, 6" lift 4 passes
Lab: 210,770 cy x .005 hrs/cy x \$24.99/hr = \$26,336
Equip: 210,770 cy x 0.22 = \$46,369

Water Truck 3,000 gallon
Lab: 210,770cy x 008hrs/cy x \$23.82 = \$40,164
Equipment: 210,770 cy x \$0.39/cy = \$82,200

WBS No: 1GAB0A01
Activity ID: 1GCP100070

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Disk and Tractor
Lab: 210,770 cy x 0.005 hrs/cy x \$24.99 = \$26,336
Equip: 210,770 cy x 0.16/cy = \$33,723

Spotter @ Fill (4 ea.)
Labor: 40 wks x 160hrs/wks x \$16.92 = \$108288

Total: \$3,342,527/210,770 cy = \$15.85/cy

This estimate is based on estimator judgement, historical data, and commercial databases from similar type work.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	13.41 Dollars
Factors		15.8586	Dollars				

0.84576 [SYS 061400] .84576000 - Svstem

Line Item LFEAER2335 - Earthwork/Engineered Fill

BOE

SEE BELOW FOR THE FOLLOWING TEMPLATE INFORMATION

Trade Publication - Publication Date - Volume/Page - Trade Pub. Item Desc - Breakdown of Trade Pub. Cost Data: Unit Cost Adjustment factor - none - Revised Unit Cost - none - Basis for adjustment - none

Engineered fill, Buy &ld at pit, haul 20 Miles rt
Lab:143,693 cy x .005hrs/cy x \$24.99/hr = \$17,954
Mat:143,693 cy x \$5.05/cy = \$725,649
Equip:143,693 cy x \$0.42 = \$60,351

Spread Engineered fill, with dozer, no compaction
Lab:124,950 cy x .012 hrs/cy x \$24.99 = \$37,470
Equip:124,950 cy x \$0.84/cy = \$104,958

Haul Engineered Fill, 20 mile rt, 16.5 cy Truck
Lab: 143,693 cy x .074hrs/cy x \$24.55/hr = \$261,047
Equip: 143,693 cy x 5.18 = \$744,329

Compaction sheepsfoot, 6" lift 4 passes
Lab: 124,950 cy x .005 hrs/cy x \$24.99/hr = \$15,613
Equip: 124,950 cy x 0.22 = \$27,489

Water Truck 3,000 gallon
Lab: 124,950cy x 008hrs/cy x \$23.82 = \$23,810
Equipment:124,950 cy x \$0.39/cy = \$48,731

Disk and Tractor
Lab: 124,950 cy x 0.005 hrs/cy x \$24.99 = \$15,613
Equip: 124,950 cy x 0.16/cy = \$19,992

Total: \$2,103,007/124,950 cy = \$16.83/cy

This estimate is based on estimator judgement, historical data, and commercial databases from similar type work.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	14.23 Dollars
Factors		16.83	Dollars				

0.84576 [SYS 061400] .84576000 - Svstem

Line Item LFEAER2340 - Provide Landscaping

BOE	SEE BELOW FOR THE FOLLOWING TEMPLATE INFORMATION									
	Trade Publication - Publication Date - Volume/Page - Trade Pub. Item Desc - Breakdown of Trade Pub. Cost Data: Unit Cost Adjustment factor - none - Revised									

WBS No: 1GAB0A01
Activity ID: 1GCP100070

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Unit Cost - none - Basis for adjustment - none

Seeding

Lab: 222,829sy x 0.048hrs/sy x \$24.99 = \$267,288

Material: 222,829sy x \$0.16/sy = \$35,653

Equip: 222,829sy x 0.22hrs/sy = \$49,022

Total: \$351,963/222,829 sy = \$1.58 sy

This estimate is based on estimator judgement, historical data, and commercial databases from similar type work.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	1.34	Dollars

Factors 1.58 Dollars

0.84576 [SYS 061400] .84576000 - Svstem

Line Item LFEAER2345 - Place Top Soil

BOE

SEE BELOW FOR THE FOLLOWING TEMPLATE INFORMATION

Trade Publication - Publication Date - Volume/Page - Trade Pub. Item Desc - Breakdown of Trade Pub. Cost Data: Unit Cost Adjustment factor - none - Revised
Unit Cost - none - Basis for adjustment - none

Topsoil, Buy &ld at pit,

Lab: 57,477 cy x .005hrs/cy x \$24.99/hr = \$7182

Mat: 57,477 cy x \$7.50/cy = \$431,078

Equip: 57,477 cy x \$0.42/cy = \$24,140

Topsoil, Spread w/dozer, no compaction

Lab: 49,980 cy x .012 hrs/cy x \$24.99 = \$14,988

Equip: 49,980 x 0.84 hrs/cy x \$24.99 = \$41,983

Topsoil, Haul 20 miles rt, 16.5 cy trucks

Labor: 57,477 cy x 0.074hrs/cy x \$24.55 = \$104,418

Equip: 57,477 cy x 5.18 = \$297,730

Water Truck

Lab: 49,980cy x 008hrs/cy x \$23.82 = \$9524

Equipment: 49,980cy x \$0.39/cy = \$19492

Disk and Tractor

Lab: 49,980cy x 0.005 hrs/cy x \$24.99 = \$6245

Equip: 49,980cy x 0.16/cy = \$7997

Total: \$964,778/49,980 cy = \$19.30/cy

This estimate is based on estimator judgement, historical data, and commercial databases from similar type work.

For more complete detail refer to Timberline estimate No. 111111-3A "OU-7 Landfill Cap" by John Hopkins, RMRS X4974.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	16.32	Dollars

Factors 19.3 Dollars

0.84576 [SYS 061400] .84576000 - Svstem

Line Item LFEAER2350 - Clean Out Old Ditch

BOE

Excavating, Bulk Bank Measure

Excavating, Backhoe, hyd, crawler mtd.,3 cy cap = 160cy/hr

Mat: 770cy x .0125hrs/cy x \$26.015/cy = \$250

Equip:770 x .0625hrs/cy x \$262.13/hr = \$1,262

WBS No: 1GAB0A01
Activity ID: 1GCP100070

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Fill
Fill spread dumped material By Dozer
Lab: 770cy x 0.012 hrs/cy x \$23.44 = \$217
Equip: 770cy x .008hrs/cy x \$102.45 = \$631

Hauling
Hauling, Bank Measure, 12 cy dump truck, 1/4 mi RT 3.7 loads/hr
Lab: 770cy x .02247hrs x \$27.89 = \$483
Equip: 770cy x .02247hrs x \$49.83 = \$862

Total: \$3,704/770 cy = \$4.81 cy

This estimate is based on estimator judgement, historical data, and commercial databases from similar type work.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	4.07	Dollars

Factors 4.81 Dollars

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item LFEAER2360 - Repair/Install New Slurry Wall

BOE

This template is taken from historical cost on slurry walls (S.M. Stoller/Terramatrix Data0 during the IM/IRA Decision Document. Reference the IM/IRA Decision Document

Direct Cost
Construct Slurry Wall
1.00 ls 46,405 sf x \$13.00/sf = \$603265

Indirect Cost
Project/Const Maanagement
1.00 ls \$120,700
Contractors OH&P
1.00 ls \$150,900
Construction Quality Assurance
1.00 ls \$90,500
Health & Safety Oversight
1.00 ls \$30,200
Administrative
1.00 ls \$60400

Total Project Costs - \$1,055,965/46405sf = \$22.7554

This estimate is based on estimator judgement, historical data, and commercial databases from similar type work.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	19.25	Dollars

Factors 22.7554 Dollars

0.84576 [SYS 061400] .84576000 - Svsstem

Starts In FY ★

BOE

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

0.84576 [SYS 061400] .84576000 - System

BOE

<i>Factors</i>	1686330 Dollars
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<i>Cost Risk</i>	1	<i>Schedule Risk</i>	1
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Total for Activity 1GCP100105:

BOE

Basis for adjustment - none

<i>Factors</i>	435	HRS
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WBS No: 1GAB0A01
Activity ID: 1GCP100105

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	607.52 Dollars
Factors		607.52 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	399.36 Dollars
Factors		399.363 Dollars					

Activity ID: 1GCP100110 Description: Perform Water Balance Study

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	WATER BALANCE STUDY	1.00	each	EE	0	0	0	35.522	0	35.522	0	35.522
0200	K-H oversight of subcont.	1.00	each	EE	275	275	8.129	0	0	8.129	3.878	12.007
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	2.542	2.542	0	2.542
Total for Activity 1GCP100110:						275	8.129	35.522	2.542	46.193	3.878	50.070

Line Item 0100 - WATER BALANCE STUDY

BOE

Estimators Experience - Experience with similar Environmental Restoration project work scope.
Experience Item Desc - Based on previous experience with work scope at the Rocky Mountain Arsenal (RMA) and conversation with Lou Greer of Morrison Knudsen Corp at RMA.

Breakdown of Cost Data:

Item - Water Balance Study
Units - \$
Unit Cost - \$42000 Sub/c
Unit Cost Adjustment factor - none
Revised Unit Cost - none
Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	E050	ENVIRONMENTAL ENGINEERS	K265S	ER Programs	Linear	35.521.92 Dollars
Factors		42000 SUB/C DOLLARS					

0.84576 [SYS 0614001 .84576000 - Svstem

Line Item 0200 - K-H oversight of subcont.

BOE

Estimators Experience - Experience with similar Environmental Restoration project work scope
Experience Item Desc -

Breakdown of Cost Data:

Item - Oversight
Units - hrs
Unit Cost - 275 hrs
Unit Cost Adjustment factor - none
Revised Unit Cost - none
Basis for adjustment - none

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	275.00 Hours
Factors		275 Hours					

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1.542.30 Dollars
Factors		1542.3 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	999.42 Dollars
Factors		999.417 Dollars					

WBS No: 1GAB0A01
Activity ID: 1GCP100120

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter * Starts In FY *

Activity ID: 1GCP100120 Description: Demonstrate RFCA Attachment 10 Requirements

Cost Risk 2 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	RFCA ATTACHMENT 10	1.00	each	EE	0	0	0	71.890	0	71.890	0	71.890
0200	K-H oversight of subcontractor	1.00	each	EE	275	275	8.129	0	0	8.129	3.878	12.007
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	4.487	4.487	0	4.487
Total for Activity 1GCP100120:						275	8.129	71.890	4.487	84.505	3.878	88.383

Line Item 0100 - RFCA ATTACHMENT 10

BOE	Estimators Experience - Experience with similar Environmental Restoration project work scope. Experience Item Desc - Based on previous experience with work scope at the Rocky Mountain Arsenal (RMA) and conversation with Lou Greer of Morrison Knudsen Corp at RMA. Breakdown of Cost Data: Item - RFCA Att. 10 Demonstration Units - \$ Unit Cost - \$85000 Sub/c Unit Cost Adjustment factor - none Revised Unit Cost - none Basis for adjustment - none This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	A5H	SUBCONTRACTED SRVS	E050	ENVIRONMENTAL ENGINEERS	K265S	ER Programs	Linear	71,889.60	Dollars

Factors 85000 SUB/C DOLLARS

0.84576 [SYS 061400] .84576000 - System

Line Item 0200 - K-H oversight of subcontractor

BOE	Estimators Experience - Experience with similar Environmental Restoration project work scope Experience Item Desc - Breakdown of Cost Data: Item - Oversight Units - hrs Unit Cost - 275 hrs Unit Cost Adjustment factor - none Revised Unit Cost - none Basis for adjustment - none
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	275.00	Hours

Factors 275 Hours

Line Item SYS - Contingency And Escalation

BOE										
Resources	<i>Cost Element</i>			<i>Skill</i>		<i>Department</i>		<i>Curve</i>	<i>Quantity</i>	<i>Units</i>
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	2,722.43	Dollars

Factors 2722.43 Dollars

ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1.764.15	Dollars
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Factors 1764.15 Dollars

Activity ID: 1GCP100130 Description: Readiness Assess/Environ Readiness Evaluation

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	READINESS ASSESSMENT	1.00	each	EE	400	400	21.380	25.373	0	46.753	6.029	52.782
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	7.537	7.537	0	7.537
Total for Activity 1GCP100130:						400	21.380	25.373	7.537	54.289	6.029	60.319

WBS No: 1GAB0A01
Activity ID: 1GCP100130

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Line Item 0100 - READINESS ASSESSMENT

BOE	Estimators Experience - Experience with similar Environmental Restoration project work scope									
	Experience Item Desc - Past ER projects that initiated Readiness Reviews									
	Breakdown of Cost Data:									
	Item - Project Scope / Concept Design									
	Units - lot									
	Unit Cost - 400 hrs; \$30000 sub/c support									
	Unit Cost Adjustment factor - none									
	Revised Unit Cost - none									
	Basis for adjustment - none									
	This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.									

Resources	Cost Element			Skill		Department		Curve	Quantity	Units	
	750	STRAIGHT TIME BASE		M020	MANAGERS (GRADE 69 - 72)		K265S	ER Programs	Linear	200.00	Hours
	Factors	200	HRS								
	750	STRAIGHT TIME BASE		M020	MANAGERS (GRADE 69 - 72)		K265S	ER Programs	Linear	200.00	Hours
	Factors	200	HRS								
	A5H	SUBCONTRACTED SRVS		E050	ENVIRONMENTAL ENGINEERS		K265S	ER Programs	Linear	25.372.80	Dollars
	Factors	30000	SUB/C DOLLARS								
0.84576 [SYS 061400] .84576000 - Svstem											

Line Item SYS - Contingency And Escalation

BOE										
Resources										
	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	2.468.67	Dollars
	Factors	2468.67 Dollars								
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	5.067.93	Dollars
	Factors	5067.93 Dollars								

Activity ID: 1GCP100140 Description: Field Document Preparation

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	DOCUMENTATION PREP	1.00	each	EE	300	300	8.868	33.830	0	42.698	2.501	45.199
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	6.503	6.503	0	6.503
Total for Activity 1GCP100140:						300	8.868	33.830	6.503	49.202	2.501	51.702

Line Item 0100 - DOCUMENTATION PREP

BOE	Estimators Experience - Experience with similar Environmental Restoration project work scope									
	Experience Item Desc -									
	Breakdown of Cost Data: KH Costs									
	Item - Prepare for field work by overseeing and assisting the Subcontractor to obtain approval on HASP/JHAs, training requirements and other field document requirements.									
	Units - hours									
	Unit Cost - 300 hrs									
	Unit Cost Adjustment factor - none									
	Revised Unit Cost - none									
	Basis for adjustment - none									
	Breakdown of Cost Data: Subcontractors Cost									
	Item - Document Preparation for Field Implementation									
	Units - Dollars									
	Unit Cost - 30K and 10K for the Subcontractor to develop project specific field documents such as the HASP/JHAs and training requirements before field work commences.									
	Unit Cost Adjustment factor - none									

WBS No: 1GAB0A01
Activity ID: 1GCP100140

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Revised Unit Cost - none
Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	300.00	Hours
Factors 300 HRS								
A5H	SUBCONTRACTED SRVS	E050	ENVIRONMENTAL ENGINEERS	K265S	ER Programs	Linear	25.372.80	Dollars
Factors 30000 SUB/C DOLLARS								
0.84576 [SYS 061400] .84576000 - Svsstem								
A5H	SUBCONTRACTED SRVS	P170	OTHER ADMINISTRATIVE & PROFF	K265S	ER Programs	Linear	8.457.60	Dollars
Factors 10000 SUB/ CORP SUPPORT - SUB/C								
0.84576 [SYS 061400] .84576000 - Svsstem								

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	2.163.34	Dollars
Factors 2163.34 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	4.339.86	Dollars
Factors 4339.86 Dollars								

Activity ID: 1GCP100150

Description: Prepare Closeout Report

Cost Risk 3 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	CLOSEOUT REPORT PREP	1.00	each	EE	300	300	11.257	85.422	0	96.679	3.917	100.596
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	54.923	54.923	0	54.923
Total for Activity 1GCP100150:						300	11.257	85.422	54.923	151.602	3.917	155.519

Line Item 0100 - CLOSEOUT REPORT PREP

BOE

Estimators Experience - Experience with similar Environmental Restoration project work scope
Experience Item Desc - Reference Estimate #EP1000-3C

Breakdown of Cost Data:

Item - Closure Report
Units - lot
Unit Cost - 300 hrs; \$101000 Sub/c
Unit Cost Adjustment factor - none
Revised Unit Cost - none
Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	200.00	Hours
Factors 200 HRS								
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	K265S	ER Programs	Linear	100.00	Hours
Factors 100 HRS								
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	85.421.76	Dollars
Factors 101000 sub/c support								

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	39.339.29	Dollars
Factors 39339.3 Dollars								

WBS No: 1GAB0A01
Activity ID: 1GCP100150

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	15,583.91	Dollars
Factors	15583.9 Dollars							

Activity ID: 1GCP100170 Description: Model Differences RMA & RFETS (SOIL PROP.PRECIP)

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	MODEL DIFFERENCES	1.00	each	EE	0	0	0	17.761	0	17.761	0	17.761
0200	K-H oversight of subcont	1.00	each	EE	275	275	8.129	0	0	8.129	3.878	12.007
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	1.578	1.578	0	1.578
Total for Activity 1GCP100170:						275	8.129	17.761	1.578	27.468	3.878	31.346

Line Item 0100 - MODEL DIFFERENCES

BOE	Estimators Experience - Experience with similar Environmental Restoration project work scope. Experience Item Desc - Based on previous experience with work scope at the Rocky Mountain Arsenal (RMA) and conversation with Lou Greer of Morrison Knudsen Corp at RMA. Breakdown of Cost Data: Item - Model Differences Units - \$ Unit Cost - \$21000 Sub/c Unit Cost Adjustment factor - none Revised Unit Cost - none Basis for adjustment - none This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
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Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	A5H	SUBCONTRACTED SRVS		E050	ENVIRONMENTAL ENGINEERS	K265S	ER Programs	Linear	17.760.96	Dollars
	Factors 21000 sub/c support									

0.84576 [SYS 061400] .84576000 - System

Line Item 0200 - K-H oversight of subcont

BOE	Estimators Experience - Experience with similar Environmental Restoration project work scope Experience Item Desc - Breakdown of Cost Data: Item - Oversight Units - hrs Unit Cost - 275 hrs Unit Cost Adjustment factor - none Revised Unit Cost - none Basis for adjustment - none
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Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE		E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	275.00	Hours
	Factors	275	Hours							

Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	952.20	Dollars
	Factors 952.200 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	625.94	Dollars
	Factors 625.944 Dollars									

Activity ID: 1GCP100190 Description: Perform Modeling with Unsat-H (Soils)

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	PERFORM MODELING	1.00	each	EE	0	0	0	35.522	0	35.522	0	35.522
None		1.00		EE	275	275	8.129	0	0	8.129	3.328	11.457

WBS No: 1GAB0A01
Activity ID: 1GCP100190

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter * Starts In FY *

SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	4.758	4.758	0	4.758
Total for Activity 1GCP100190:						275	8.129	35.522	4.758	48.409	3.328	51.737

Line Item 0100 - PERFORM MODELING

BOE	Estimators Experience - Experience with similar Environmental Restoration project work scope. Experience Item Desc - Based on previous experience with work scope at the Rocky Mountain Arsenal (RMA) and conversation with Lou Greer of Morrison Knudsen Corp at RMA. Breakdown of Cost Data: Item - modeling Units - \$ Unit Cost - \$42000 Sub/c Unit Cost Adjustment factor - none Revised Unit Cost - none Basis for adjustment - none This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.											
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	A5H	SUBCONTRACTED SRVS	S020	ENVIRONMENTAL SCIENTISTS	K265S	ER Programs	Linear	35.521.92	Dollars
	Factors	42000	subc support						

0.84576 [SYS 061400] .84576000 - Svstem

Line Item None -

BOE	Estimators Experience - Experience with similar Environmental Restoration project work scope Experience Item Desc - Breakdown of Cost Data: Item - Oversight Units - hrs Unit Cost - 275 hrs Unit Cost Adjustment factor - none Revised Unit Cost - none Basis for adjustment - none											
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Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE		E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	275.00	Hours
	Factors	275	Hours							

Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	3.117.94	Dollars
	Factors 3117.94 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	1.640.08	Dollars
	Factors 1640.08 Dollars									

Activity ID: 1GEAER0101 Description: O&M System - (OU7 Landfill Seep Collection) FY00

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
01	Operation and Maintenance of Treatment System	1.00	each	HC	156	156	4.658	14.347	0	19.004	2.273	21.277
Total for Activity 1GEAER0101:						156	4.658	14.347	0	19.004	2.273	21.277

Line Item 01 - Operation and Maintenance of Treatment System

BOE	Historical Data Source: WAD 02,Wadlet 1.1.04.01.05 overall WBS Spending Variance Report rpt_002a dated 10/16/98, located in T893B cube 95. Item Desc: Management and technical support for the operation, maintenance, and reporting of the treatment System.											
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WBS No: 1GAB0A01
Activity ID: 1GEAER0101

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Item Desc: Operate and Maintain OU7 Treatment System
Breakdown of Historical Data:
Item: Operate and Maintain OU7 Treatment System
Units: 1 Year
Unit Cost: \$22,650 Dollars
Unit Cost Adjustment factor:
Revised Unit Cost:
Basis for adjustment:

Resources

	Cost Element		Skill		Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	26.96	Hours
Factors	40 Hours		0.67401 January 2000 Earned Value Factor					
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	64.70	Hours
Factors	96 hours		0.67401 January 2000 Earned Value Factor					
750	STRAIGHT TIME BASE	E120	SAFETY ENGINEERS	R100S	RMRS Salaried	Linear	16.18	Hours
Factors	24 hours		0.67401 January 2000 Earned Value Factor					
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	16.18	Hours
Factors	24 hours		0.67401 January 2000 Earned Value Factor					
750	STRAIGHT TIME BASE	P170	OTHER ADMINISTRATIVE & PROFE	R100S	RMRS Salaried	Linear	32.35	Hours
Factors	48 hours		0.67401 January 2000 Earned Value Factor					
A5C	SUPPLIES	0000	NONE	R100S	RMRS Salaried	Linear	1.094.59	Dollars
Factors	1624 dollars		0.67401 January 2000 Earned Value Factor					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	5.392.07	Dollars
Factors	8000 dollars		0.67401 January 2000 Earned Value Factor					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	4.948.88	Dollars
Factors	7342.45 dollars		0.67401 January 2000 Earned Value Factor					
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Three Step	1.500.83	Dollars
Factors	2066.66 DOLLARS		0.72621 January 2000 Earned Value Factor					
A5H	SUBCONTRACTED SRVS	P170	OTHER ADMINISTRATIVE & PROFE	K265S	ER Programs	Linear	1.034.09	Dollars
Factors	1534.24 DOLLARS		0.67401 January 2000 Earned Value Factor					
A5H	SUBCONTRACTED SRVS	S020	ENVIRONMENTAL SCIENTISTS	K265S	ER Programs	Linear	376.10	Dollars
Factors	558 DOLLARS		0.67401 January 2000 Earned Value Factor					

Activity ID: 1GEAER0105 Description: O&M System - (OU7 Landfill Seep Collection) FY01

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
01	Operation and Maintenance of Treatment System	1.00	each	HC	208	208	6.117	18.694	0	24.812	2.918	27.730
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	1.470	1.470	0	1.470
Total for Activity 1GEAER0105:						208	6.117	18.694	1.470	26.282	2.918	29.200

Line Item 01 - Operation and Maintenance of Treatment System

BOE

Historical Data Source:
WAD 02,Wadlet 1.1.04.01.05 overall WBS Spending Variance Report rpt_002a dated 10/16/98, located in T893B cube 95.

Item Desc:
Management and technical support for the operation, maintenance, and reporting of the treatment System.

Item Desc: Operate and Maintain OU7 Treatment System
Breakdown of Historical Data:
Item: Operate and Maintain OU7 Treatment System
Units: 1 Year
Unit Cost: \$58,000 Dollars
Unit Cost Adjustment factor: -\$30,000
Revised Unit Cost: \$28,000 Dollars
Basis for adjustment: \$30K reduction in funding due to efficiencies of the new aeration system. Operation/maintenance and waste packaging costs have been reduced by using the passive aeration system for this activity. Sampling Costs are reduced in the year 2000 when monthly sampling has been proposed to be reduced to semi-annual sampling.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

WBS No: 1GAB0A01
Activity ID: 1GEAER0105

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	40.00	Hours
Factors	40 Hours					
	750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	96.00	Hours
Factors	96 hours					
	750 STRAIGHT TIME BASE	E120 SAFETY ENGINEERS	R100S RMRS Salaried	Linear	24.00	Hours
Factors	24 hours					
	750 STRAIGHT TIME BASE	P170 OTHER ADMINISTRATIVE & PROFE	R100S RMRS Salaried	Linear	48.00	Hours
Factors	48 hours					
	A5C SUPPLIES	0000 NONE	R100S RMRS Salaried	Linear	1,624.00	Dollars
Factors	1624 dollars					
	A5H SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	6,209.95	Dollars
Factors	7342.45 dollars					
	A5H SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	6,766.08	Dollars
Factors	8000 dollars					
	A5H SUBCONTRACTED SRVS	E130 OTHER ENGINEERS	K265S ER Programs	Linear	571.56	Dollars
Factors	675.8 Prime Dollars					
	A5H SUBCONTRACTED SRVS	P070 COST ESTIMATORS PLANNERS AN	K265S ER Programs	Linear	1,730.42	Dollars
Factors	2046 DOLLARS					
	A5H SUBCONTRACTED SRVS	P170 OTHER ADMINISTRATIVE & PROFE	K265S ER Programs	Linear	1,314.51	Dollars
Factors	1554.24 DOLLARS					
	A5H SUBCONTRACTED SRVS	S020 ENVIRONMENTAL SCIENTISTS	K265S ER Programs	Linear	477.85	Dollars
Factors	565 DOLLARS					
				0.84576 [SYS 061400] .84576000 - System		

Line Item SYS - Contingency And Escalation

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	887.01	Dollars
Factors	887.013 Dollars					
	ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	583.09	Dollars
Factors	583.092 Dollars					

Activity ID: 1GEAER0110 Description: O&M System - (OU7 Landfill Seep Collection) FY02

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
01	Operation and Maintenance of Treatment System	1.00	each	HC	208	208	6,117	18,702	0	24,819	2,159	26,979
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	4,032	4,032	0	4,032
Total for Activity 1GEAER0110:						208	6,117	18,702	4,032	28,852	2,159	31,011

Line Item 01 - Operation and Maintenance of Treatment System

BOE	<div>Historical Data Source: WAD 02,Wadlet 1.1.04.01.05 overall WBS Spending Variance Report rpt_002a dated 10/16/98, located in T893B cube 95.</div> <div>Item Desc: Management and technical support for the operation, maintenance, and reporting of the treatment System.</div> <div>Item Desc: Operate and Maintain OU7 Treatment System Breakdown of Historical Data: Item: Operate and Maintain OU7 Treatment System Units: 1 Year</div>
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WBS No: 1GAB0A01
Activity ID: 1GEAER0110

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Unit Cost: \$58,000 Dollars
Unit Cost Adjustment factor: -\$30,000
Revised Unit Cost: \$28,000 Dollars
Basis for adjustment: \$30K reduction in funding due to efficiencies of the new aeration system. Operation/maintenance and waste packaging costs have been reduced by using the passive aeration system for this activity. Sampling Costs are reduced in the year 2000 when monthly sampling has been proposed to be reduced to semi-annual sampling.
This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

	Cost Element		Skill		Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	96.00	Hours
Factors	96 hours							
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 Hours							
750	STRAIGHT TIME BASE	E120	SAFETY ENGINEERS	R100S	RMRS Salaried	Linear	24.00	Hours
Factors	24 hours							
750	STRAIGHT TIME BASE	P170	OTHER ADMINISTRATIVE & PROFE	R100S	RMRS Salaried	Linear	48.00	Hours
Factors	48 hours							
A5C	SUPPLIES	0000	NONE	R100S	RMRS Salaried	Linear	1,624.00	Dollars
Factors	1624 dollars							
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	6,766.08	Dollars
Factors	8000 dollars							
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	6,209.95	Dollars
Factors	7342.45 dollars							
A5H	SUBCONTRACTED SRVS	E130	OTHER ENGINEERS	K265S	ER Programs	Linear	571.56	Dollars
Factors	675.8 Dollars							
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	1,748.19	Dollars
Factors	2067 DOLLARS							
A5H	SUBCONTRACTED SRVS	P170	OTHER ADMINISTRATIVE & PROFE	K265S	ER Programs	Linear	1,297.60	Dollars
Factors	1534.24 DOLLARS							
A5H	SUBCONTRACTED SRVS	S020	ENVIRONMENTAL SCIENTISTS	K265S	ER Programs	Linear	484.62	Dollars
Factors	573 DOLLARS							

Line Item SYS - Contingency And Escalation

BOE

Resources

	Cost Element		Skill		Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	2,771.57	Dollars
Factors	2771.57 Dollars							
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1,260.75	Dollars
Factors	1260.75 Dollars							

Activity ID: 1GEAER0115 Description: O&M System - (OU7 Landfill Seep Collection) FY03

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
01	Operation and Maintenance of Treatment System	1.00	each	HC	208	208	6,117	18,724	0	24,842	1,944	26,785
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	5,751	5,751	0	5,751
Total for Activity 1GEAER0115:						208	6,117	18,724	5,751	30,593	1,944	32,536

Line Item 01 - Operation and Maintenance of Treatment System

BOE

Historical Data Source:
WAD 02,Wadlet 1.1.04.01.05 overall WBS Spending Variance Report rpt_002a dated 10/16/98, located in T893B cube 95.

WBS No: 1GAB0A01
Activity ID: 1GEAER0115

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Item Desc:
Management and technical support for the operation, maintenance, and reporting of the treatment System.

Item Desc: Operate and Maintain OU7 Treatment System
Breakdown of Historical Data:
Item: Operate and Maintain OU7 Treatment System
Units: 1 Year
Unit Cost: \$58,000 Dollars
Unit Cost Adjustment factor: -\$30,000
Revised Unit Cost: \$28,000 Dollars
Basis for adjustment: \$30K reduction in funding due to efficiencies of the new aeration system. Operation/maintenance and waste packaging costs have been reduced by using the passive aeration system for this activity. Sampling Costs are reduced in the year 2000 when monthly sampling has been proposed to be reduced to semi-annual sampling.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours						
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	96.00	Hours
Factors	96	hours						
750	STRAIGHT TIME BASE	E120	SAFETY ENGINEERS	R100S	RMRS Salaried	Linear	24.00	Hours
Factors	24	hours						
750	STRAIGHT TIME BASE	P170	OTHER ADMINISTRATIVE & PROFE	R100S	RMRS Salaried	Linear	48.00	Hours
Factors	48	hours						
A5C	SUPPLIES	0000	NONE	R100S	RMRS Salaried	Linear	1.624.00	Dollars
Factors	1624	dollars						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	6.766.08	Dollars
Factors	8000	dollars						
						0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	6.209.95	Dollars
Factors	7342.45	dollars						
						0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	E130	OTHER ENGINEERS	K265S	ER Programs	Linear	571.56	Dollars
Factors	675.8	Prime Dollars						
						0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	1.751.06	Dollars
Factors	2070.4	DOLLARS						
						0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	P170	OTHER ADMINISTRATIVE & PROFE	K265S	ER Programs	Linear	1.297.60	Dollars
Factors	1534.24	DOLLARS						
						0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	S020	ENVIRONMENTAL SCIENTISTS	K265S	ER Programs	Linear	504.07	Dollars
Factors	596	DOLLARS						
						0.84576 [SYS 061400]	.84576000	- System

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	3.470.31	Dollars
Factors	3470.31	Dollars						
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	2.280.62	Dollars
Factors	2280.62	Dollars						

Activity ID: 1GEAER4000 Description: OU-7 Landfill Cap Long Term Maint. & Monitoring

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
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WBS No: 1GAB0A01
Activity ID: 1GEAER4000

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

				Type	Hours/Unit	Total	Total	Activity Filter Cost	& Escalation	Starts In FY Cost		
LFEAER3110	Post Closure Monitoring	1.00	each	EE	1,200	1,200	35,472	21,144	0	56,616	12,344	68,960
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	48,025	48,025	0	48,025
Total for Activity 1GEAER4000:						1,200	35,472	21,144	48,025	104,641	12,344	116,986

Line Item LFEAER3110 - Post Closure Monitoring

BOE	Estimators Experience - Experience with similar Environmental Restoration project work scope Experience Item Desc - Operations and Post Closure activities for OU-4 Breakdown of Cost Data: Item - Monitoring Units -lot Unit Cost - 1200 hrs; \$25,000 sub/c Unit Cost Adjustment factor - none Revised Unit Cost - none Basis for adjustment - none This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.											
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Resources	Cost Element			Skill		Department		Curve	Quantity	Units	
	750	STRAIGHT TIME BASE		E050	ENVIRONMENTAL ENGINEERS		R100S	RMRS Salaried	Linear	1,200.00	Hours
	Factors 1200 Hours										
	A5H	SUBCONTRACTED SRVS		0000	NONE		K265S	ER Programs	Linear	21,144.00	Dollars
	Factors 25000 Dollars										

0.84576 [SYS 061400] .84576000 - Svstem

Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	34,245.64	Dollars
	Factors 34245.6 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	13,779.80	Dollars
	Factors 13779.8 Dollars									

Activity ID: 1GEAER4005 Description: OU-7 Landfill Cap Long Term Maint. & Monitoring

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
LFEAER3110	Post Closure Monitoring	1.00	each	EE	1,200	1,200	35,472	21,144	0	56,616	12,344	68,960
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	58,537	58,537	0	58,537
Total for Activity 1GEAER4005:						1,200	35,472	21,144	58,537	115,153	12,344	127,497

Line Item LFEAER3110 - Post Closure Monitoring

BOE	Estimators Experience - Experience with similar Environmental Restoration project work scope Experience Item Desc - Operations and Post Closure activities for OU-4 Breakdown of Cost Data: Item - Monitoring Units -lot Unit Cost - 1200 hrs; \$25,000 sub/c Unit Cost Adjustment factor - none Revised Unit Cost - none Basis for adjustment - none This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.											
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	1,200.00	Hours
	Factors	1200	Hours						
	A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	21,144.00	Dollars
	Factors	25000	Dollars						

0.84576 [SYS 061400] .84576000 - Svstem

WBS No: 1GAB0A01
Activity ID: 1GEAER4005

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	43.155.44
		Factors 43155.4 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	15.381.59
		Factors 15381.6 Dollars					

WBS No: 1GAB0B01 Title: Buffer Zone Groundwater Projects
Activity ID: 1GCK500050 Description: Prepare Decision Document IA Plume

Cost Risk 4 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	PAM	1.00	each	EE	740	740	23.428	0	0	23.428	8.106	31.534
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	9.016	9.016	0	9.016
Total for Activity 1GCK500050:						740	23.428	0	9.016	32.444	8.106	40.550

Line Item 0100 - PAM

BOE

Estimator's Experience based generally on historical data for Ryan's Pit

Item Desc:
Preparation of PAM in support of source removal of previously characterized UBC.

Breakdown of Cost Data:

Item: Preparation of PAM for Ryan's Pit source removal action modified to include GIS support.

Units: hours

Unit Cost: 40 hours GIS support, 72 hours project manager technical support, 628 hours for technical staff to write document.

Unit Cost Adjustment Factor: None

Revised Unit Hours: None

Basis for adjustment. None

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	628.00
		Factors 628 hrs					
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	K253S	Remediation, Industrial & Site Serv	Linear	72.00
		Factors 72 hrs					
750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried	Linear	40.00
		Factors 40 hrs					

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	6.598.00
		Factors 6598.00 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	2.418.21
		Factors 2418.21 Dollars					

Activity ID: 1GCK500100 Description: Develop Project Plans for IA Plume

Cost Risk 4 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Develop Plans	1.00	ea	HC	302	302	8.867	7.445	0	16.313	2.501	18.813
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	2.750	2.750	0	2.750
Total for Activity 1GCK500100:						302	8.867	7.445	2.750	19.063	2.501	21.564

Line Item 10 - Develop Plans

BOE

These costs are based on the historical costs for the Mound Site Plume, a similar project.

Historical Data Source - P&I Reporting System Report PCS_002

Item Desc - Plans

Breakdown of Historical Data:

WBS No: 1GAB0B01
Activity ID: 1GCK500100

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Item - Plans
Units - lot
Unit Cost - 302 hours, \$8,803 Dollars
Unit Cost Adjustment factor -
Revised Unit Cost - N/A
Basis for adjustment - N/A

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

	Cost Element		Skill		Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160	hours						
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours/ea						
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	K253S	Remediation, Industrial & Site Serv	Linear	20.00	Hours
Factors	20	Hours/ea						
750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried	Linear	42.00	Hours
Factors	42	Hours/ea						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	20.00	Hours
Factors	20	h						
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	20.00	Hours
Factors	20	h						
A5H	SUBCONTRACTED SRVS	P050	COMPLIANCE INSPECTORS	K253S	Remediation, Industrial & Site Serv	Linear	7.445.23	Dollars
Factors	8803	subc support						

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources

	Cost Element		Skill		Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	944.08	Dollars
Factors	944.081	Dollars						
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1.806.38	Dollars
Factors	1806.38	Dollars						

Activity ID: 1GCK500105 Description: Perform Title I,II,III Design for IA Plume

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
30	Perform Title I,II,III Design	1.00	ls	EE	480	480	13.442	141.742	0	155.184	3.791	158.974
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	22.873	22.873	0	22.873
Total for Activity 1GCK500105:						480	13.442	141.742	22.873	178.057	3.791	181.847

Line Item 30 - Perform Title I,II,III Design

BOE

Item Desc - Title I,II,III Design
Breakdown of Historical Data:
Item - Title I,II,III Design -based on the design cost for the East Trenches Plume Project
Units - lot
Unit Cost - 167,000 dollars based on the OHM/Parson Subcontract 3 people 160 hours each for review, comment, site engineering interface to meet Site requirements, \$500 for copying and other supplies.
Unit Cost Adjustment factor -
Revised Unit Cost - N/A
Basis for adjustment - N/A

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

	Cost Element		Skill		Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E020	CIVIL ENGINEERS	K253S	Remediation, Industrial & Site Serv	Linear	160.00	Hours
Factors	160	hours						
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	320.00	Hours
Factors	320	hours						

WBS No: 1GAB0B01
Activity ID: 1GCK500105

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project
WBS Filter
Activity Filter
Baseline Devl
1GAB
*

Starts In FY *

A5C	SUPPLIES	0000	NONE	K253S	Remediation, Industrial & Site Serv	Linear	500.00	Dollars
Factors	500	Dollars/lb						
A5H	SUBCONTRACTED SRVS	P050	COMPLIANCE INSPECTORS	K253S	Remediation, Industrial & Site Serv	Linear	141,241.90	Dollars
Factors	167000	subc support						

0.84576 [SYS 061400] .84576000 - Svstem

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	7,608.89	Dollars
	Factors 7608.89 Dollars								
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	15,264.10	Dollars
	Factors 15264.1 Dollars								

Activity ID: 1GCK500110 Description: Readiness Assessment for IA Plume

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
20	Readiness Assessment	1.00	ls	EE	300	300	8,868	5,075	0	13,943	2,501	16,443
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	2,366	2,366	0	2,366
Total for Activity 1GCK500110:						300	8,868	5,075	2,366	16,308	2,501	18,809

Line Item 20 - Readiness Assessment

BOE

Item Desc - Project Preparation
Breakdown of Historical Data:
Item - Project Preparation
Units - lot
Unit Cost - 300 hours, \$6,000 Dollars
Unit Cost Adjustment factor -
Revised Unit Cost - N/A
Basis for adjustment - N/A

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element			Skill		Department		Curve	Quantity	Units	
	750	STRAIGHT TIME BASE		E050	ENVIRONMENTAL ENGINEERS		R100S	RMRS Salaried	Linear	300.00	Hours
	Factors	300	Hours/lb								
	A5H	SUBCONTRACTED SRVS		0000	NONE		K265S	ER Programs	Linear	3,383.04	Dollars
	Factors	4000	dollars								
	0.84576 [SYS 061400] .84576000 - Svstem										
	A5H	SUBCONTRACTED SRVS		0000	NONE		K265S	ER Programs	Linear	1,691.52	Dollars
	Factors	2000	Subcontractor's Cost for Readiness								

0.84576 [SYS 061400] .84576000 - Svstem

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	787.02	Dollars
	Factors 787.019 Dollars								
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1,578.83	Dollars
	Factors 1578.83 Dollars								

Activity ID: 1GCK500200 Description: Field Preparation for IA Plume

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
IBCKER0820	Field Preparation	1.00	ls	EE	80	80	2,520	36,960	0	39,480	711	40,190
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	5,783	5,783	0	5,783
Total for Activity 1GCK500200:						80	2,520	36,960	5,783	45,262	711	45,973

Line Item IBCKER0820 - Field Preparation

BOE

WBS No: 1GAB0B01
Activity ID: 1GCK500200

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

This task includes Subcontractor Training and mobilization.

Estimated length of Plume collectin and treatment System will be similar to the East Trenches Plume with a similar length of 1,150' * 15' = 17,250 sf

East Trenches Plume Unburdened Cost for Subcontracted costs (from IT proposal and actual costs)

East Trenches Plume

Engineering Design	\$	167,000
Project Documentation/ HASP/FIP	\$	25,000
O&M Manual/Acceptance Testing	\$	15,600
Training and Mobilization	\$	43,700
Construction of collection and treatment system	\$	1,206,000
Demobilization	\$	20,700

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors 40 Hours/ls								
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	20.00	Hours
Factors 20 Hours/ls								
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	20.00	Hours
Factors 20 Hours/ls								
A5H	SUBCONTRACTED SRVS	0000	NONE	K253S	Remediation, Industrial & Site Serv	Linear	36.959.71	Dollars
Factors 43700 Dollars								

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1.923.61	Dollars
Factors 1923.61 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	3.858.93	Dollars
Factors 3858.93 Dollars								

Activity ID: 1GCK500205

Description: Field Oversight & Support for IA Plume

Cost Risk 2 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
IBCKER0835	Field Oversight & Support	1.00	ls	HC	800	800	24.333	2.038	0	26.371	7.352	33.723
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	9.167	9.167	0	9.167
Total for Activity 1GCK500205:						800	24.333	2.038	9.167	35.538	7.352	42.890

Line Item IBCKER0835 - Field Oversight & Support

BOE

Item Desc - Field Oversight & Support

Breakdown of Historical Data:

Item - Field Oversight & Support - Based on requirement for East Trenches Plume

Units - lot

Unit Cost - 4 people 4 months = 640 hours, \$2,038 Dollars for supplies

H&S oversight = 160 hours for full time support

Unit Cost Adjustment factor - N/A

Revised Unit Cost - N/A

Basis for adjustment - N/A

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	640.00	Hours
Factors 640 Hours/ls								
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors 160 Hours/ls								
A5C	SUPPLIES	P050	COMPLIANCE INSPECTORS	K253S	Remediation, Industrial & Site Serv	Linear	2.038.16	Dollars
Factors 2038.16 subc support								

WBS No: 1GAB0B01
Activity ID: 1GCK500205

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	5.303.38
Factors		5303.38 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	3.863.96
Factors		3863.96 Dollars					

Activity ID: 1GCK500210 Description: Construct Reactive Barrier Walls for IA Plume

Cost Risk 4 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
IBCKER0825	Construct Reactive Barrier Walls	2.00	ea	HC	0	0	0	2,074.988	0	2,074.988	0	2,074.988
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	633.149	633.149	0	633.149
Total for Activity 1GCK500210:						0	0	2,074.988	633.149	2,708.137	0	2,708.137

Line Item IBCKER0825 - Construct Reactive Barrier Walls

BOE

Estimated length of Plume collectin and treatment System will be similar to the East Trenches Plume with a similar length of 1,150' * 15' = 17,250 sf

East Trenches Plume Unburdened Cost for Subcontracted costs (from IT proposal and actual costs)
East Trenches Plume

Construction of collection and treatment system \$1,206,000
Demobilization \$ 20,700
Total \$1,226,700

Roll-offs will be used for the sanitary waste generated during construction such as packaging for the construction materials, pallets, etc. 5 drums of other waste are assumed based on the East Trenches Plume construction. The drummed material is expected to be oil soaked dirt from equipment leaks.

Line item was adjusted by a factor of 2
Revised Unit Cost - (line item level only)
Basis for adjustment - The system will be twice as long as the existing East Trenches Plume system

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	1.037.494.00
Factors		1226700 Dollars					

0.84576 [SYS 061400] .84576000 - System

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	385.389.90
Factors		385390 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	247.759.20
Factors		247759 Dollars					

Activity ID: 1GCK500215 Description: Perform Project Management for IA Plume

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
IBCKER0855	Perform Project Management	2.00	ea	HC	800	1.600	72.709	27.889	0	100.597	21.243	121.841
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	25.896	25.896	0	25.896
Total for Activity 1GCK500215:						1.600	72.709	27.889	25.896	126.494	21.243	147.737

Line Item IBCKER0855 - Perform Project Management

BOE

Item Desc - Project Management
Breakdown of Historical Data:
Item - Project Management
Units - lot
Unit Cost - 800 hours, \$16,487 Dollars

WBS No: 1GAB0B01
Activity ID: 1GCK500215

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Unit Cost Adjustment factor - Line item was adjusted by a factor of 2
Revised Unit Cost - 1,600 \$32,974 (line item level only)
Basis for adjustment - The system will be twice as long as the existing East Trenches Plume system

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	120.00	Hours
Factors 120 h								
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	K253S	Remediation, Industrial & Site Serv	Linear	600.00	Hours
Factors 600 Hours								
750	STRAIGHT TIME BASE	P150	TRAINERS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors 40 h								
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors 40 hours								
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	5.032.94	Dollars
Factors 5950.79 subc support								
0.84576 [SYS 061400] .84576000 - Svsstem								
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	8.911.38	Dollars
Factors 10536.5 subc support - p&i								
0.84576 [SYS 061400] .84576000 - Svsstem								

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	13.339.02	Dollars
Factors 13339.0 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	12.557.28	Dollars
Factors 12557.3 Dollars								

Activity ID: 1GCK500300 Description: Prepare Closure Report for IA Plume

Cost Risk 2 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
100	Prepare Closure Report	1.00	ea	HC	160	160	4.730	0	0	4.730	1.646	6.376
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	3.445	3.445	0	3.445
Total for Activity 1GCK500300:						160	4.730	0	3.445	8.174	1.646	9.820

Line Item 100 - Prepare Closure Report

BOE

Item Desc - Project Closure Report
Breakdown of Historical Data:
Item - Project Closure Report
Units - lot
Unit Cost - 160 hours
Unit Cost Adjustment factor - N/A
Revised Unit Cost - N/A
Basis for adjustment - N/A

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors 160 Hours/ea								

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	2.456.92	Dollars
Factors 2456.93 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	987.66	Dollars
Factors 987.664 Dollars								

Activity ID: 1GCK500305 Description: IA Plume Operation and Startup

Cost Risk 4 Schedule Risk 2

WBS No: 1GAB0B01
Activity ID: 1GCK500305

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
200	IA Plume Operations and Startup	1.00	each	EE	720	720	22.270	1.118	0	23.388	7.750	31.138
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	17.178	17.178	0	17.178
Total for Activity 1GCK500305:						720	22.270	1.118	17.178	40.566	7.750	48.315

Line Item 200 - IA Plume Operations and Startup

BOE
Item Desc - Operations & Startup
Breakdown of Historical Data: Hours to transfer operations, begin O&M, procure maintenance equipment as required.
Item - Operations & Startup
Units - lot
Unit Cost - 720 hours, \$1,118 Dollars
Unit Cost Adjustment factor - N/A
Revised Unit Cost - N/A
Basis for adjustment - N/A

Resources	Cost Element			Skill		Department		Curve	Quantity	Units	
	750	STRAIGHT TIME BASE		E050	ENVIRONMENTAL ENGINEERS		R100S	RMRS Salaried	Linear	188.00	Hours
	Factors	188 hours									
	750	STRAIGHT TIME BASE		E050	ENVIRONMENTAL ENGINEERS		R100S	RMRS Salaried	Linear	168.01	Hours
	Factors	168.006 hours									
	750	STRAIGHT TIME BASE		S020	ENVIRONMENTAL SCIENTISTS		R100S	RMRS Salaried	Linear	364.00	Hours
	Factors	364 hours									
	A5C	SUPPLIES		0000	NONE		K265S	ER Programs	Linear	500.00	Dollars
	Factors	500 dollars									
	A5C	SUPPLIES		0000	NONE		K265S	ER Programs	Linear	618.00	Dollars
Factors	618 d										

Line Item SYS - Contingency And Escalation

BOE Resources												
	<i>Cost Element</i>			<i>Skill</i>			<i>Department</i>			<i>Curve</i>	<i>Quantity</i>	<i>Units</i>
	CON	CONTINGENCY		0000	NONE		ZDEPT	No Department		Linear	12.353.99	Dollars
	<i>Factors</i> 12354 Dollars											
	ESC	ESCALATION		0000	NONE		ZDEPT	No Department		Linear	4.823.71	Dollars
<i>Factors</i> 4823.71 Dollars												

WBS No: 1GAB0B03 Title: Plume Monitoring & Maintenance

Activity ID: 1GCKER0711 Description: Plume Maintenance FY00

Cost Risk 4 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Plume Verification Monitoring	3.00	each	EE	27	81	2.061	45.293	0	47.354	1.006	48.359
20	Monthly Inspection	3.00	each	EE	0	0	0	25.073	0	25.073	0	25.073
30	Quarterly Report	3.00	each	EE	27	81	2.061	0	0	2.061	1.006	3.067
40	Annual Review of System Performance	3.00	each	EE	67	202	5.152	0	0	5.152	2.514	7.666
50	Project Management	3.00	each	EE	103	309	8.273	0	0	8.273	4.037	12.311
Total for Activity 1GCKER0711:						673	17.547	70.366	0	87.913	8.563	96.476

Line Item 10 - Plume Verification Monitoring

BOE
Estimator's Experience/Vendor Quote based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility and a conversation with Will Goldberg, MSE, (406) 494-7330, vendor who installed Mound Treatement System.

Item Desc:
Sampling requirements were derived from conversations with Leslie Dunstan RMRS SW Sampling coordinator, and Steve Singer, RMRS GW Monitoring Manager

Breakdown of Cost Data:
Item: Analytical Services
Units: Dollars
Unit Cost: 10k
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

WBS No: 1GAB0B03
Activity ID: 1GCKER0711

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Breakdown of Cost Data:
Item: Monitoring Services
Units: Dollars
Unit Cost: 10k
Unit Cost Adjustment Factor: 3.0
Revised Unit Hours: n/a

Basis for adjustment. The adjustment factor of 3.0 is to apply the single system cost to 3 systems.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	P050	COMPLIANCE INSPECTORS	R100S	RMRS Salaried	Linear	26.96	Hours
Factors	40 hrs	0.674	January 2000 Earned Value Factor					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	1.617.60	Dollars
Factors	2400 dollars	0.674	January 2000 Earned Value Factor					
A5H	SUBCONTRACTED SRVS	0000	NONE	K267S	Analytical Laboratory Services	Linear	13.480.00	Dollars
Factors	20000 dollars	0.674	January 2000 Earned Value Factor					

Line Item 20 - Monthly Inspection

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
Monthly inspection and minor maintenance of a single system.

Breakdown of Cost Data:
Item: Monthly inspection and minor maintenance.
Units: Dollars
Unit Cost: 12k
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Breakdown of Cost Data:
Item: Annual supplies for a single system
Units: Dollars
Unit Cost: 400
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Basis for adjustment. 12k cost based on 20 hours per month at \$50 per hour for 12 months per year.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	269.60	Dollars
Factors	400 dollars	0.674	January 2000 Earned Value Factor					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	8.088.00	Dollars
Factors	12000 dollars	0.674	January 2000 Earned Value Factor					

Line Item 30 - Quarterly Report

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
Quarterly reporting and meetings for a single system.

Breakdown of Historical Data:
Item: Preparation of SAP for Ryan's Pit source removal action.
Units: hours
Unit Cost: 320 hours (40 per quarter)
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Basis for adjustment.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	P050	COMPLIANCE INSPECTORS	R100S	RMRS Salaried	Linear	26.96	Hours
Factors	40 hrs	0.674	January 2000 Earned Value Factor					

WBS No: 1GAB0B03
Activity ID: 1GCKER0711

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Line Item 40 - Annual Review of System Performance

BOE		Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.									
		Item Desc: Annual review of system performance for a single system									
		Breakdown of Historical Data: Item: System Performance Review. Units: hours Unit Cost: 100 hours Unit Cost Adjustment Factor: 1.0 Revised Unit Hours: n/a									
		Basis for adjustment.									
Resources		<i>Cost Element</i>		<i>Skill</i>		<i>Department</i>		<i>Curve</i>		<i>Quantity</i>	<i>Units</i>
	750	STRAIGHT TIME BASE		P050	COMPLIANCE INSPECTORS	R100S	RMRS Salaried	Linear		67.40	Hours
	<i>Factors</i>	100	hrs	0.674	January 2000 Earned Value Factor						

Line Item 50 - Project Management

BOE		Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.									
		Item Desc: General project management for a single system.									
		Breakdown of Historical Data: Item: Project Management Units: hours Unit Cost: 156 hours (3 hours per week) Unit Cost Adjustment Factor: 1.0 Revised Unit Hours:									
		Basis for adjustment.									
Resources		<i>Cost Element</i>		<i>Skill</i>		<i>Department</i>		<i>Curve</i>		<i>Quantity</i>	<i>Units</i>
	750	STRAIGHT TIME BASE		P050	COMPLIANCE INSPECTORS	R100S	RMRS Salaried	Linear		84.92	Hours
	<i>Factors</i>	126	hrs	0.674	January 2000 Earned Value Factor						
	750	STRAIGHT TIME BASE		P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear		17.98	Hours
	<i>Factors</i>	26.67	hrs	0.674	January 2000 Earned Value Factor						

Activity ID: 1GCKER0715 Description: Plume Maintenance FY01

Cost Risk 4 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Plume System Sampling	3.00	each	EE	40	120	3,547	56,835	0	60,382	1,692	62,074
20	Monthly Inspection	3.00	each	EE	0	0	0	31,647	0	31,647	0	31,647
30	Quarterly Report	3.00	each	EE	320	960	28,378	0	0	28,378	13,536	41,914
40	Annual Review of System Performance	3.00	each	EE	100	300	8,868	0	0	8,868	4,230	13,098
50	Project Management	3.00	each	EE	156	468	13,834	0	0	13,834	6,599	20,433
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	9,213	9,213	0	9,213
Total for Activity 1GCKER0715:						1,848	54,627	88,482	9,213	152,322	26,057	178,379

Line Item 10 - Plume System Sampling

BOE		Estimator's Experience/Vendor Quote based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility and a conversation with Will Goldberg, MSE, (406) 494-7330, vendor who installed Mound Treatment System.									
		Item Desc: Sampling requirements were derived from conversations with Leslie Dunstan RMRS SW Sampling coordinator, and Steve Singer, RMRS GW Monitoring Manager									
		Breakdown of Cost Data: Item: Analytical Services Units: Dollars Unit Cost: 10k									

WBS No: 1GAB0B03
Activity ID: 1GCKER0715

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Unit Cost Adjustment Factor: 1.0 Revised Unit Hours: n/a						
Breakdown of Cost Data: Item: Monitoring Services Units: Dollars Unit Cost: 10k Unit Cost Adjustment Factor: 3.0 Revised Unit Hours: n/a						
Basis for adjustment. The adjustment factor of 3.0 is to apply the single system cost to 3 systems.						
This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.						

Resources	Cost Element		Skill		Department		Curve	Quantity	Units	
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours	
	Factors 40 hrs									
	A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2.029.82	Dollars	
	Factors 2400 dollars									
								0.84576	[SYS 061400]	.84576000 - Svsstem
	A5H	SUBCONTRACTED SRVS	0000	NONE	K267S	Analytical Laboratory Services	Linear	16.915.20	Dollars	
	Factors 20000 dollars									
								0.84576	[SYS 061400]	.84576000 - Svsstem

Line Item 20 - Monthly Inspection

BOE		Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.					
		Item Desc: Montly inspection and minor maintenance of a single system.					
		Breakdown of Cost Data: Item: Monthly inspection and minor maintenance. Units: Dollars Unit Cost: 12k Unit Cost Adjustment Factor: 1.0 Revised Unit Hours: n/a					
		Breakdown of Cost Data: Item: Annual supplies for a single system Units: Dollars Unit Cost: 400 Unit Cost Adjustment Factor: 1.0 Revised Unit Hours: n/a					
		Basis for adjustment. 12k cost based on 20 hours per month at \$50 per hour for 12 months per year.					
		This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.					

Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	A5C	SUPPLIES		0000	NONE	K265S	ER Programs	Linear	400.00	Dollars
	Factors	400 dollars								
	A5H	SUBCONTRACTED SRVS		0000	NONE	K265S	ER Programs	Linear	10.149.12	Dollars
	Factors	12000 dollars								
								0.84576	ISYS 061400] .84576000 - Svstem	

Line Item 30 - Quarterly Report

BOE		Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.					
		Item Desc: Quarterly reporting and meetings for a single system.					
		Breakdown of Historical Data: Item: Preparation of Quarterly Resports Units: hours					

WBS No: 1GAB0B03
Activity ID: 1GCKER0715

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Unit Cost: 160 hours (80 per quarter)
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a
Basis for adjustment.

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	320.00	Hours
Factors 320 hrs						

Line Item 40 - Annual Review of System Performance

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
Annual review of system performance for a single system

Breakdown of Historical Data:
Item: System Performance Review.
Units: hours
Unit Cost: 100 hours
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Basis for adjustment.

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	100.00	Hours
Factors 100 hrs						

Line Item 50 - Project Management

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
General project management for a single system.

Breakdown of Historical Data:
Item: Project Management
Units: hours
Unit Cost: 156 hours (3 hours per week)
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours:

Basis for adjustment.

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	156.00	Hours
Factors 156 hrs						

Line Item SYS - Contingency And Escalation

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	5.655.52	Dollars
Factors 5655.52 Dollars						
ESC	ESCALATION	0000 NONE	ZDEPT No Department	Linear	3.557.19	Dollars
Factors 3557.19 Dollars						

Activity ID: 1GCKER0720 Description: Plume Maintenance FY02

Cost Risk 4 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Plume System Sampling	3.00	each	EE	40	120	3.547	56.835	0	60.382	1.252	61.634
20	Monthly Inspection	3.00	each	EE	0	0	0	31.647	0	31.647	0	31.647
30	Quarterly Report	3.00	each	EE	160	480	14.189	0	0	14.189	5.009	19.197
40	Annual Review of System Performance	3.00	each	EE	100	300	8.868	0	0	8.868	3.130	11.998
50	Project Management	3.00	each	EE	156	468	13.834	0	0	13.834	4.883	18.718

WBS No: 1GAB0B03
Activity ID: 1GCKER0720

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	22.091	22.091	0	22.091
Total for Activity 1GCKER0720:						1.368	40.438	88.482	22.091	151.012	14.275	165.287

Line Item 10 - Plume System Sampling

BOE	Estimator's Experience/Vendor Quote based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility and a conversation with Will Goldberg, MSE, (406) 494-7330, vendor who installed Mound Treatment System.											
	Item Desc: Sampling requirements were derived from conversations with Leslie Dunstan RMRS SW Sampling coordinator, and Steve Singer, RMRS GW Monitoring Manager											
	Breakdown of Cost Data: Item: Analytical Services Units: Dollars Unit Cost: 20k Unit Cost Adjustment Factor: 1.0 Revised Unit Hours: n/a											
	Breakdown of Cost Data: Item: Monitoring Services Units: Dollars Unit Cost: \$2,400 Unit Cost Adjustment Factor: 3.0 Revised Unit Hours: n/a											
	Basis for adjustment. The adjustment factor of 3.0 is to apply the single system cost to 3 systems. 40 hours for Env. Engineer oversight and support											
	This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.											

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
	Factors 40 hrs								
	A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2.029.82	Dollars
	Factors 2400 dollars								

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A5H	SUBCONTRACTED SRVS	0000	NONE	K267S	Analytical Laboratory Services	Linear	16.915.20	Dollars
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Factors 20000 dollars

0.84576 ISYS 0614001.84576000 - Svsstem

Line Item 20 - Monthly Inspection

BOE	Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.											
	Item Desc: Montly inspection and minor maintenance of a single system.											
	Breakdown of Cost Data: Item: Monthly inspection and minor maintenance. Units: Dollars Unit Cost: 12k Unit Cost Adjustment Factor: 1.0 Revised Unit Hours: n/a											
	Breakdown of Cost Data: Item: Annual supplies for a single system Units: Dollars Unit Cost: 400 Unit Cost Adjustment Factor: 1.0 Revised Unit Hours: n/a											
	Basis for adjustment. 12k cost based on 20 hours per month at \$50 per hour for 12 months per year.											
	This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.											

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
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WBS No: 1GAB0B03
Activity ID: 1GCKER0720

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	400.00	Dollars
Factors	400	dollars						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	10.149.12	Dollars
Factors	12000	dollars						

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item 30 - Qaurterly Report

BOE	Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.
Item Desc:	Quarterly reporting and meetings for a single system.
Breakdown of Historical Data:	
Item:	Quarterly Report
Units:	hours
Unit Cost:	160 hours (40 per quarter)
Unit Cost Adjustment Factor:	1.0
Revised Unit Hours:	n/a
Basis for adjustment.	

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	160.00	Hours
	Factors 160 hrs								

Line Item 40 - Annual Review of System Performance

BOE	Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.
Item Desc:	Annual review of system performance for a single system
Breakdown of Historical Data:	
Item:	System Performance Review.
Units:	hours
Unit Cost:	100 hours
Unit Cost Adjustment Factor:	1.0
Revised Unit Hours:	n/a
Basis for adjustment.	

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	100.00	Hours
	Factors	100	hrs						

Line Item 50 - Project Management

BOE	Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.
Item Desc:	General project management for a single system.
Breakdown of Historical Data:	
Item:	Project Management
Units:	hours
Unit Cost:	156 hours (3 hours per week)
Unit Cost Adjustment Factor:	1.0
Revised Unit Hours:	
Basis for adjustment.	

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	156.00	Hours
	Factors	156	hrs						

Line Item SYS - Contingency And Escalation

BOE

WBS No: 1GAB0B03
Activity ID: 1GCKER0720

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Resources	Cost Element			Skill		Department		Curve	Quantity	Units		
	CON	CONTINGENCY			0000	NONE		ZDEPT	No Department	Linear	15.399.73	Dollars
	Factors 15399.7 Dollars											
	ESC	ESCALATION			0000	NONE		ZDEPT	No Department	Linear	6.691.72	Dollars
	Factors 6691.72 Dollars											

Activity ID: 1GCKER0725 Description: Plume Maintenance FY03

Cost Risk 4 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Plume System Sampling	3.00	each	EE	40	120	3.547	56.835	0	60.382	1.227	61.610
20	Monthly Inspection	3.00	each	EE	0	0	0	31.647	0	31.647	0	31.647
30	Quarterly Report	3.00	each	EE	160	480	14.189	0	0	14.189	4.909	19.098
40	Annual Review of System Performance	3.00	each	EE	100	300	8.868	0	0	8.868	3.068	11.936
50	Project Management	3.00	each	EE	156	468	13.834	0	0	13.834	4.787	18.621
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	40.861	40.861	0	40.861
Total for Activity 1GCKER0725:						1.368	40.438	88.482	40.861	169.782	13.992	183.773

Line Item 10 - Plume System Sampling

BOE	Estimator's Experience/Vendor Quote based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility and a conversation with Will Goldberg, MSE, (406) 494-7330, vendor who installed Mound Treatment System. Item Desc: Sampling requirements were derived from conversations with Leslie Dunstan RMRS SW Sampling coordinator, and Steve Singer, RMRS GW Monitoring Manager Breakdown of Cost Data: Item: Analytical Services Units: Dollars Unit Cost: 20k Unit Cost Adjustment Factor: 1.0 Revised Unit Hours: n/a Breakdown of Cost Data: Item: Monitoring Services Units: Dollars Unit Cost: \$2400 Unit Cost Adjustment Factor: 3.0 Revised Unit Hours: n/a Basis for adjustment. The adjustment factor of 3.0 is to apply the single system cost to 3 systems. 40 hours of Env. Eng. For oversight and support. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
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Resources	Cost Element			Skill		Department		Curve	Quantity	Units	
	750	STRAIGHT TIME BASE		E050	ENVIRONMENTAL ENGINEERS		R100S	RMRS Salaried	Linear	40.00	Hours
	Factors	40	hrs								
	A5H	SUBCONTRACTED SRVS		0000	NONE		K265S	ER Programs	Linear	2.029.82	Dollars
	Factors	2400	dollars								
		0.84576									
	A5H	SUBCONTRACTED SRVS		0000	NONE		K267S	Analytical Laboratory Services	Linear	16.915.20	Dollars
	Factors	20000	dollars								
		ISYS 0614001 .84576000 - System									

0.84576 [SYS 061400] .84576000 - System

0.84576 [SYS 061400] .84576000 - System

Line Item 20 - Monthly Inspection

BOE	Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility. Item Desc: Monthly inspection and minor maintenance of a single system. Breakdown of Cost Data: Item: Monthly inspection and minor maintenance. Units: Dollars
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WBS No: 1GAB0B03
Activity ID: 1GCKER0725

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Unit Cost: 12k
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Breakdown of Cost Data:
Item: Annual supplies for a single system
Units: Dollars
Unit Cost: 400
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Basis for adjustment. 12k cost based on 20 hours per month at \$50 per hour for 12 months per year.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	400.00	Dollars
Factors 400 dollars								
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	10.149.12	Dollars
Factors 12000 dollars								

0.84576 [SYS 061400] .84576000 - Svstem

Line Item 30 - Qaurterly Report

BOE

Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
Quarterly reporting and meetings for a single system.

Breakdown of Historical Data:
Item: Quarterly Report
Units: hours
Unit Cost: 160 hours (40 per quarter)
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Basis for adjustment.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors 160 hrs								

Line Item 40 - Annual Review of System Performance

BOE

Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
Annual review of system performance for a single system

Breakdown of Historical Data:
Item: System Performance Review.
Units: hours
Unit Cost: 100 hours
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Basis for adjustment.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	100.00	Hours
Factors 100 hrs								

Line Item 50 - Project Management

BOE

Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
General project management for a single system.

WBS No: 1GAB0B03
Activity ID: 1GCKER0725

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Breakdown of Historical Data:
Item: Project Management
Units: hours
Unit Cost: 156 hours (3 hours per week)
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours:

Basis for adjustment.

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	156.00	Hours
Factors 156 hrs						

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	29.901.96	Dollars
Factors 29902 Dollars						
	ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	10.959.25	Dollars
Factors 10959.3 Dollars						

Activity ID: 1GCKER0730 Description: Plume Maintenance FY04

Cost Risk 4 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Plume System Sampling	3.00	each	EE	40	120	3.547	56.835	0	60.382	1.000	61.383
20	Monthly Inspection	3.00	each	EE	0	0	0	31.647	0	31.647	0	31.647
30	Quarterly Report	3.00	each	EE	160	480	14.189	0	0	14.189	4.001	18.190
40	Annual Review of System Performance	3.00	each	EE	100	300	8.868	0	0	8.868	2.501	11.369
50	Project Management	3.00	each	EE	156	468	13.834	0	0	13.834	3.901	17.735
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	20.515	20.515	0	20.515
Total for Activity 1GCKER0730:						1.368	40.438	88.482	20.515	149.436	11.404	160.839

Line Item 10 - Plume System Sampling

BOE

Estimator's Experience/Vendor Quote based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility and a conversation with Will Goldberg, MSE, (406) 494-7330, vendor who installed Mound Treatment System.

Item Desc:

Sampling requirements were derived from conversations with Leslie Dunstan RMRS SW Sampling coordinator, and Steve Singer, RMRS GW Monitoring Manager

Breakdown of Cost Data:

Item: Analytical Services

Units: Dollars

Unit Cost: 20k

Unit Cost Adjustment Factor: 1.0

Revised Unit Hours: n/a

Breakdown of Cost Data:

Item: Monitoring Services

Units: Dollars

Unit Cost: \$2,400

Unit Cost Adjustment Factor: 3.0

Revised Unit Hours: n/a

Basis for adjustment. The adjustment factor of 3.0 is to apply the single system cost to 3 systems. 40 hours of env. Engineer time for oversight and support

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	40.00	Hours
Factors 40 hrs						

WBS No: 1GAB0B03
Activity ID: 1GCKER0730

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2.029.82	Dollars
Factors	2400	dollars						

0.84576 [SYS 061400] .84576000 - Ssystem

A5H	SUBCONTRACTED SRVS	0000	NONE	K267S	Analytical Laboratory Services	Linear	16.915.20	Dollars
Factors	20000	dollars						

0.84576 [SYS 061400] .84576000 - Ssystem

Line Item 20 - Monthly Inspection

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
Montly inspection and minor maintenance of a single system.

Breakdown of Cost Data:
Item: Monthly inspection and minor maintenance.
Units: Dollars
Unit Cost: 12k
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Breakdown of Cost Data:
Item: Annual supplies for a single system
Units: Dollars
Unit Cost: 400
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Basis for adjustment. 12k cost based on 20 hours per month at \$50 per hour for 12 months per year.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	400.00	Dollars

Factors 400 dollars

A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	10.149.12	Dollars
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Factors 12000 dollars

0.84576 [SYS 061400] .84576000 - Ssystem

Line Item 30 - Quarterly Report

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
Quarterly reporting and meetings for a single system.

Breakdown of Historical Data:
Item: Preparation of SAP for Ryan's Pit source removal action.
Units: hours
Unit Cost: 160 hours (40 per quarter)
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Basis for adjustment.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	160.00	Hours

Factors 160 hrs

Line Item 40 - Annual Review of System Performance

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
Annual review of system performance for a single system

Breakdown of Historical Data:

WBS No: 1GAB0B03
Activity ID: 1GCKER0730

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Item: System Performance Review. Units: hours Unit Cost: 100 hours Unit Cost Adjustment Factor: 1.0 Revised Unit Hours: n/a Basis for adjustment.						
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	100.00	Hours
	Factors 100 hrs								

Line Item 50 - Project Management

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility. Item Desc: General project management for a single system. Breakdown of Historical Data: Item: Project Management Units: hours Unit Cost: 156 hours (3 hours per week) Unit Cost Adjustment Factor: 1.0 Revised Unit Hours: Basis for adjustment.						
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	156.00	Hours
	Factors 156 hrs								

Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	7.041.70	Dollars
	Factors 7041.70 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	13.473.39	Dollars
	Factors 13473.4 Dollars									

Activity ID: 1GCKER0735 Description: Plume Maintenance FY05

Cost Risk 5 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Reactive Media Replacement	4.00	each	EE	40	160	4.730	75.780	0	80.510	1.646	82.156
15	Plume System Sampling	4.00	each	EE	40	160	4.730	75.780	0	80.510	1.646	82.156
20	Monthly Inspection	4.00	each	EE	0	0	0	42.196	0	42.196	0	42.196
30	Quarterly Report	4.00	each	EE	160	640	18.918	0	0	18.918	6.584	25.502
40	Annual Review of System Performance	4.00	each	EE	100	400	11.824	0	0	11.824	4.115	15.939
50	Project Management	4.00	each	EE	156	624	18.445	0	0	18.445	6.419	24.864
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	155.800	155.800	0	155.800
Total for Activity 1GCKER0735:						1.984	58.647	193.757	155.800	408.204	20.409	428.613

Line Item 10 - Reactive Media Replacement

BOE Estimator's Experience/Vendor Quote based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility and a conversation with Will Goldberg, MSE, (406) 494-7330, vendor who installed Mound Treatement System. Item Desc: Ten year reactive media (iron) changeout. Iron will be purchasred from Connelly for \$400 per ton delivered to RFETS. Assumed 50 tons of iron in each system. Will be changed out using a vac truck system. Breakdown of Cost Data: Item: Vac Truck. (\$100 per hour, assume 24 hours per system) Units: Dollars						
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WBS No: 1GAB0B03
Activity ID: 1GCKER0735

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Unit Cost: 2.4k
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Breakdown of Cost Data:
Item: Iron. (\$400 per ton delivered to site, Will Golderg, MSE (406) 494-7330. 50 tons per system)
Units: Dollars
Unit Cost: 20k
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: 20k

Breakdown of Cost Data:
Item: Supervision of transfer operation
Units: Dollars
Unit Cost: 40
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Basis for adjustment. The adjustment factor of 4.0 is to apply the single sytem cost to 4 systems.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00Hours
Factors	40	hrs					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	16.915.20Dollars
Factors	20000	dollars					
						0.84576 [SYS 061400]	.84576000 - System
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2.029.82Dollars
Factors	2400	dollars					
						0.84576 [SYS 061400]	.84576000 - System

Line Item 15 - Plume System Sampling

BOE	Estimator's Experience/Vendor Quote based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility and a conversation with Will Goldberg, MSE, (406) 494-7330, vendor who installed Mound Treatment System.						
	Item Desc: Sampling requirements were derived from conversations with Leslie Dunstan RMRS SW Sampling coordinator, and Steve Singer, RMRS GW Monitoring Manager						
	Breakdown of Cost Data: Item: Analytical Services Units: Dollars Unit Cost: 20k Unit Cost Adjustment Factor: 1.0 Revised Unit Hours: n/a						
	Breakdown of Cost Data: Item: Monitoring Services Units: Dollars Unit Cost: \$2,400 Unit Cost Adjustment Factor: 3.0 Revised Unit Hours: n/a						
	Basis for adjustment. The adjustment factor of 3.0 is to apply the single system cost to 3 systems. 40 hours of env. Engineer time for oversight and support.						
	This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.						

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00Hours
Factors	40	hrs					

WBS No: 1GAB0B03
Activity ID: 1GCKER0735

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project
WBS Filter
Activity Filter
Baseline Devl
1GAB
*

Starts In FY *

A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2.029.82	Dollars
Factors	2400	dollars						

0.84576 [SYS 061400] .84576000 - Ssystem

A5H	SUBCONTRACTED SRVS	0000	NONE	K267S	Analytical Laboratory Services	Linear	16.915.20	Dollars
Factors	20000	dollars						

0.84576 [SYS 061400] .84576000 - Ssystem

Line Item 20 - Monthly Inspection

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
Montly inspection and minor maintenance of a single system.

Breakdown of Cost Data:
Item: Monthly inspection and minor maintenance.
Units: Dollars
Unit Cost: 12k
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Breakdown of Cost Data:
Item: Annual supplies for a single system
Units: Dollars
Unit Cost: 400
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Basis for adjustment. 12k cost based on 20 hours per month at \$50 per hour for 12 months per year.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	400.00	Dollars

Factors 400 dollars

A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	10.149.12	Dollars
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Factors 12000 dollars

0.84576 [SYS 061400] .84576000 - Ssystem

Line Item 30 - Quarterly Report

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
Quarterly reporting and meetings for a single system.

Breakdown of Historical Data:
Item: Preparation of SAP for Ryan's Pit source removal action.
Units: hours
Unit Cost: 160 hours (40 per quarter)
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Basis for adjustment.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	160.00	Hours

Factors 160 hrs

Line Item 40 - Annual Review of System Performance

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
Annual review of system performance for a single system

Breakdown of Historical Data:

WBS No: 1GAB0B03
Activity ID: 1GCKER0735

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter * Starts In FY *

Item: System Performance Review. Units: hours Unit Cost: 100 hours Unit Cost Adjustment Factor: 1.0 Revised Unit Hours: n/a Basis for adjustment.						
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	100.00	Hours
	Factors 100 hrs								

Line Item 50 - Project Management

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility. Item Desc: General project management for a single system. Breakdown of Historical Data: Item: Project Management Units: hours Unit Cost: 156 hours (3 hours per week) Unit Cost Adjustment Factor: 1.0 Revised Unit Hours: Basis for adjustment.						
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Resources	Cost Element			Skill		Department		Curve	Quantity	Units	
	750	STRAIGHT TIME BASE		E050	ENVIRONMENTAL ENGINEERS		R100S	RMRS Salaried	Linear	156.00	Hours
	Factors 156 hrs										

Line Item SYS - Contingency And Escalation

BOE											
Resources											
	Cost Element			Skill		Department			Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department		Linear	113,537.20	Dollars
	Factors			113537 Dollars							
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department		Linear	42,262.94	Dollars
Factors			42262.9 Dollars								

Activity ID: 1GCKER0740 Description: End of Plume Maintenance

Cost Risk 4 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Plume System Sampling	4.00	each	EE	40	160	4,730	77,261	0	81,990	5,819	87,810
20	Monthly Inspection	4.00	each	EE	0	0	0	42,196	0	42,196	0	42,196
30	Quarterly Report	4.00	each	EE	160	640	18,918	0	0	18,918	23,278	42,196
40	Annual Review of System Performance	4.00	each	EE	100	400	11,824	0	0	11,824	14,548	26,372
50	Project Management	4.00	each	EE	156	624	18,445	0	0	18,445	22,696	41,141
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	101,329	101,329	0	101,329
Total for Activity 1GCKER0740:						1,824	53,917	119,457	101,329	274,703	66,341	341,044

Line Item 10 - Plume System Sampling

BOE Estimator's Experience/Vendor Quote based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility and a conversation with Will Goldberg, MSE, (406) 494-7330, vendor who installed Mound Treatment System. Item Desc: Sampling requirements were derived from conversations with Leslie Dunstan RMRS SW Sampling coordinator, and Steve Singer, RMRS GW Monitoring Manager Breakdown of Cost Data: Item: Analytical Services Units: Dollars Unit Cost: 20k Unit Cost Adjustment Factor: 4.0						
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WBS No: 1GAB0B03
Activity ID: 1GCKER0740

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Revised Unit Hours: n/a

Breakdown of Cost Data:
Item: Monitoring Services
Units: Dollars
Unit Cost: \$2400
Unit Cost Adjustment Factor: 4.0
Revised Unit Hours: n/a

Breakdown of Cost Data:
Item: Supplies and equipment
Units: Dollars
Unit Cost: 2400
Unit Cost Adjustment Factor: 4.0
Revised Unit Hours: n/a

Basis for adjustment. The adjustment factor of 4.0 is to apply the single system cost to 3 systems. 40 hours of Env. Eng. Time for oversight and maintenance

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors 40 hrs								
A5C	SUPPLIES	0000	NONE	K253S	Remediation, Industrial & Site Serv	Linear	2,400.00	Dollars
Factors 2400 dollars								
A5H	SUBCONTRACTED SRVS	0000	NONE	K253S	Remediation, Industrial & Site Serv	Linear	16,915.20	Dollars
Factors 20000 dollars								

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item 20 - Monthly Inspection

BOE

Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
Monthly inspection and minor maintenance of a single system.

Breakdown of Cost Data:
Item: Monthly inspection and minor maintenance.
Units: Dollars
Unit Cost: 12k
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Breakdown of Cost Data:
Item: Annual supplies for a single system
Units: Dollars
Unit Cost: 400
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Basis for adjustment. 12k cost based on 20 hours per month at \$50 per hour for 12 months per year.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5C	SUPPLIES	0000	NONE	R100S	RMRS Salaried	Linear	400.00	Dollars
Factors 400 dollars								
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	10,149.12	Dollars
Factors 12000 dollars								

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item 30 - Quarterly Report

BOE

Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

WBS No: 1GAB0B03
Activity ID: 1GCKER0740

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter * Starts In FY *

Item Desc:
Quarterly reporting and meetings for a single system.

Breakdown of Historical Data:
Item: Preparation of SAP for Ryan's Pit source removal action.
Units: hours
Unit Cost: 160 hours (40 per quarter)
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a
Basis for adjustment.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	160.00 Hours

Factors 160 hrs

Line Item 40 - Annual Review of System Performance

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
Annual review of system performance for a single system

Breakdown of Historical Data:
Item: System Performance Review.
Units: hours
Unit Cost: 100 hours
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a
Basis for adjustment.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	100.00 Hours

Factors 100 hrs

Line Item 50 - Project Management

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
General project management for a single system.

Breakdown of Historical Data:
Item: Project Management
Units: hours
Unit Cost: 156 hours (3 hours per week)
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours:
Basis for adjustment.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	156.00 Hours

Factors 156 hrs

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	56,219.61 Dollars

Factors 56219.6 Dollars

ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	45,109.03 Dollars
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Factors 45109.0 Dollars

Activity ID: 1GXXXER073 Description: Plume Maintenance FY06

Cost Risk 5 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
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WBS No: 1GAB0B03
Activity ID: 1GXXXER073

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

10	Reactive Media Replacement	3.86	each	EE	40	154	4.564	73.121	0	77.685	1.588	79.273
15	Plume System Sampling	3.86	each	EE	40	154	4.564	73.121	0	77.685	1.588	79.273
20	Monthly Inspection	3.86	each	EE	0	0	0	40.716	0	40.716	0	40.716
30	Quarterly Report	3.86	each	EE	160	618	18.255	0	0	18.255	6.353	24.607
40	Annual Review of System Performance	3.86	each	EE	100	386	11.409	0	0	11.409	3.970	15.379
50	Project Management	3.86	each	EE	156	602	17.798	0	0	17.798	6.194	23.992
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	239.592	239.592	0	239.592
Total for Activity 1GXXXER073:						1.914	56.589	186.958	239.592	483.139	19.693	502.832

Line Item 10 - Reactive Media Replacement

BOE

Estimator's Experience/Vendor Quote based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility and a conversation with Will Goldberg, MSE, (406) 494-7330, vendor who installed Mound Treatment System.

Item Desc:

Ten year reactive media (iron) changeout. Iron will be purchasred from Connolly for \$400 per ton delivered to RFETS. Assumed 50 tons of iron in each system. Will be changed out using a vac truck system.

Breakdown of Cost Data:

Item: Vac Truck. (\$100 per hour, assume 24 hours per system)

Units: Dollars

Unit Cost: 2.4k

Unit Cost Adjustment Factor: 1.0

Revised Unit Hours: n/a

Breakdown of Cost Data:

Item: Iron. (\$400 per ton delivered to site, Will Golderg, MSE (406) 494-7330. 50 tons per system)

Units: Dollars

Unit Cost: 20k

Unit Cost Adjustment Factor: 1.0

Revised Unit Hours: 20k

Breakdown of Cost Data:

Item: Supervision of transfer operation

Units: Dollars

Unit Cost: 40

Unit Cost Adjustment Factor: 1.0

Revised Unit Hours: n/a

Basis for adjustment. The adjustment factor of 4.0 is to apply the single sytem cost to 4 systems.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 hrs							
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	16.915.20	Dollars
Factors	20000 dollars							
							0.84576 [SYS 061400] .84576000 - System	
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2.029.82	Dollars
Factors	2400 dollars							
							0.84576 [SYS 061400] .84576000 - System	

Line Item 15 - Plume System Sampling

BOE

Estimator's Experience/Vendor Quote based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility and a conversation with Will Goldberg, MSE, (406) 494-7330, vendor who installed Mound Treatment System.

Item Desc:

Sampling requirements were derived from conversations with Leslie Dunstan RMRS SW Sampling coordinator, and Steve Singer, RMRS GW Monitoring Manager

Breakdown of Cost Data:

Item: Analytical Services

Units: Dollars

WBS No: 1GAB0B03
Activity ID: 1GXXXER073

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Unit Cost: 20k Unit Cost Adjustment Factor: 1.0 Revised Unit Hours: n/a
Breakdown of Cost Data: Item: Monitoring Services Units: Dollars Unit Cost: \$2,400 Unit Cost Adjustment Factor: 3.0 Revised Unit Hours: n/a
Basis for adjustment. The adjustment factor of 3.0 is to apply the single system cost to 3 systems. 40 hours of env. Engineer time for oversight and support.
This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 hrs							
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2.029.82	Dollars
Factors	2400 dollars							
A5H	SUBCONTRACTED SRVS	0000	NONE	K267S	Analvtical Laboratory Services	Linear	16.915.20	Dollars
Factors	20000 dollars							
							0.84576 [SYS 061400] .84576000 - Svstem	
							0.84576 [SYS 061400] .84576000 - Svstem	

Line Item 20 - Monthly Inspection

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
Montly inspection and minor maintenance of a single system.

Breakdown of Cost Data:
Item: Monthly inspection and minor maintenance.
Units: Dollars
Unit Cost: 12k
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Breakdown of Cost Data:
Item: Annual supplies for a single system
Units: Dollars
Unit Cost: 400
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a

Basis for adjustment. 12k cost based on 20 hours per month at \$50 per hour for 12 months per year.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	400.00	Dollars
Factors	400 dollars							
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	10.149.12	Dollars
Factors	12000 dollars							
							0.84576 [SYS 061400] .84576000 - Svstem	

Line Item 30 - Quarterly Report

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
Quarterly reporting and meetings for a single system.

WBS No: 1GAB0B03
Activity ID: 1GXXXER073

Rockv Flats Closure Proiect
Baseline Cost and Basis of Estimate

Proiect Baseline Devl
WBS Filter 1GAB
Activity Filter * Starts In FY *

Breakdown of Historical Data:
Item: Preparation of SAP for Ryan's Pit source removal action.
Units: hours
Unit Cost: 160 hours (40 per quarter)
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a
Basis for adjustment.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	160.00Hours
Factors		160 hrs					

Line Item 40 - Annual Review of System Performance

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
Annual review of system performance for a single system

Breakdown of Historical Data:
Item: System Performance Review.
Units: hours
Unit Cost: 100 hours
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours: n/a
Basis for adjustment.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	100.00Hours
Factors		100 hrs					

Line Item 50 - Project Management

BOE Estimator's Experience based on a conversation with Frank Huffman, Manager of the B891 consolidated wastewater treatment facility.

Item Desc:
General project management for a single system.

Breakdown of Historical Data:
Item: Project Management
Units: hours
Unit Cost: 156 hours (3 hours per week)
Unit Cost Adjustment Factor: 1.0
Revised Unit Hours:
Basis for adjustment.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	156.00Hours
Factors		156 hrs					

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	180.875.70Dollars
Factors		180876 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	58.715.83Dollars
Factors		58715.8 Dollars					

WBS No:	1GAB0B04	Title:	OU-1 French Drain Removal									
Activity ID:	1G0FDR0003	Description:	Prepare CAD/ROD Ammdment For OU-1 French Drain				Cost Risk	1	Schedule Risk	4		

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	Modification to CAD/ROD	1.00	each	EE	44	44	1.408	0	0	1.408	687	2.095

WBS No: 1GAB0B04
Activity ID: 1G0FDR0003

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Total for Activity 1G0FDR0003:

44	1,408	0	0	1,408	687	2,095
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Line Item 0100 - Modification to CAD/ROD

BOE	Estimator's Experience based generally on historical data for developing the Proposed Action Memorandum for Ryan's Pit. Item Desc: Finalize Major Modification to the OUL CAD/ROD, finalize responses to Agency comments on Major Modification to CAD/ROD, transmit documents to DOE. Breakdown of Cost Data: Item: Modification to OUL CAD/ROD. Units: hours Unit Cost: 44 Unit Cost Adjustment Factor: None Revised Unit Hours: None Basis for adjustment. None											
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Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	39.50	Hours
Factors	158 hrs	0.25	January 2000 Earned Value Factor					
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	4.50	Hours
Factors	18 hrs	0.25	January 2000 Earned Value Factor					

Activity ID: 1G0FDR0021 Description: Procurement and Field Prep OU-1 French Drain

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	Procurement & Field Prep	0.50	each	EE	359	180	4,976	1,250	0	6,226	2,428	8,654
Total for Activity 1G0FDR0021:						180	4,976	1,250	0	6,226	2,428	8,654

Line Item 0100 - Procurement & Field Prep

BOE	Estimator's Experience based generally on historical data for Trench 1 and T-3/T4 Remediation. Item Desc: Prepare Statement of Work, IWCP work package/engineering design, Conflict of Interest Documentation, Request for Proposal, Technical Evaluation, Contract Negotiations, Contract meetings, Davis-Bacon Determination, Ecology Survey/NEPA Support, and Utility Clearance/Soil Disturbance Permit, Waste Management Plan. Breakdown of Cost Data: Item: RFETS Labor Units: hours Unit Cost: 359 Unit Cost Adjustment Factor: .5 Revised Unit: None Item: Subcontractor costs to perform above individual tasks for either Trench 1 or T-3/T-4. Units: lot Unit Cost: \$10,000 Unit Cost Adjustment Factor: 0.25 Revised Unit: \$2,500 Basis for adjustment. None											
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Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	35.00	Hours
Factors	35 Hours							
750	STRAIGHT TIME BASE	E120	SAFETY ENGINEERS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	10 hrs							
750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	R100S	RMRS Salaried	Linear	13.00	Hours
Factors	13 hrs							
750	STRAIGHT TIME BASE	P050	COMPLIANCE INSPECTORS	R100S	RMRS Salaried	Linear	266.00	Hours
Factors	266 hrs							
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	10 hrs							

WBS No: 1GAB0B04
Activity ID: 1G0FDR0021

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	10	hrs						
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	10	hrs						
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KG10H	Remediation Steelworkers	Linear	5.00	Hours
Factors	5	hrs						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2,500.00	Dollars
Factors	2500	Dollars						

Activity ID: 1G0FDR0030 Description: Readiness Assessment for OU-1 French Drain

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	Readiness Assessment	1.00	each	EE	40	40	1,250	15,496	0	16,746	610	17,356
Total for Activity 1G0FDR0030:						40	1,250	15,496	0	16,746	610	17,356

Line Item 0100 - Readiness Assessment

BOE	Estimator's Experience based generally on historical data for T-3/T4 and Trench 1 Remediation. See Cost Estimate for OUI French Drain Decommissioning, April 11, 2000.
	Item Desc: Conduct Readiness Assessment in support of French Drain decommissioning activities. This activity includes subcontractor preparation of the project Work Plan, Safety & Health Plan, Corporate Health & Safety Program submittal, and Quality Control Program submittal.
	Breakdown of Cost Data: Item: RFETS Labor to perform internal readiness review. Units: hours Unit Cost: 40 Unit Cost Adjustment Factor: None Revised Unit: None
	Item: Subcontractor costs to develop implementation documentation. Units: lot Unit Cost: \$15,496 Unit Cost Adjustment Factor: None Revised Unit: None
	Basis for adjustment: None

Resources

Cost Element			Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE		E020	CIVIL ENGINEERS	R100S	RMRS Salaried	Linear	4.00	Hours
Factors	4	Hours							
750	STRAIGHT TIME BASE		E110	QUALITY CONTROL ENGINEERS	R100S	RMRS Salaried	Linear	4.00	Hours
Factors	4	Hours							
750	STRAIGHT TIME BASE		M020	MANAGERS (GRADE 69 - 72)	K265S	ER Programs	Linear	4.00	Hours
Factors	4	Hours							
750	STRAIGHT TIME BASE		P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	4.00	Hours
Factors	4	Hours							
750	STRAIGHT TIME BASE		P170	OTHER ADMINISTRATIVE & PROFF	R100S	RMRS Salaried	Linear	20.00	Hours
Factors	20	Hours							
750	STRAIGHT TIME BASE		S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	4.00	Hours
Factors	4	Hours							
A5H	SUBCONTRACTED SRVS		0000	NONE	K265S	ER Programs	Linear	15,496.00	Dollars
Factors	15496 sub/c dollars - documentation								

Activity ID: 1G0FDR0035 Description: OU-1 French Drain Construction

Cost Risk 3 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	Mobilization/Site Preparation	1.00	each	EE	140	140	4,065	32,167	0	36,232	1,984	38,216
0200	French Drain Decommissioning	1.00	each	TP	216	216	5,993	39,780	0	45,773	2,925	48,698

WBS No: 1GAB0B04
Activity ID: 1G0FDR0035

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

0300	Site Restoration	1.00	each	TP	24	24	709	4,563	0	5,272	346	5,619
Total for Activity 1G0FDR0035:						380	10,768	76,510	0	87,278	5,255	92,533

Line Item 0100 - Mobilization/Site Preparation

BOE	Estimators Experience - Estimated costs are based on experience from similar Environmental Restoration excavation projects. See Cost Estimate for OUI French Drain Decommissioning, April 11, 2000.											
	Mobilization includes: - subcontractor training, - deliver equipment and materials, - mobilize and baseline survey heavy equipment											
	Site Preparation includes: - electrical disconnect, establishing work zones, installing erosion controls, performing survey, setup facilities											
	Experience Item Desc - Trench 1, T-3/T-4, Ryan's Pit											
	Breakdown of Cost Data:											
	Item - RFETS Labor											
	Units - Hours											
	Unit Cost - 140											
	Unit Cost Adjustment factor - None											
	Revised Unit Cost - None											
	Basis for adjustment - None											
	Item - Subcontractor Costs											
	Units - lot											
	Unit Cost - \$32,167 sub/c											
	Revised Unit Cost - None											
	Basis for adjustment - None											

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	E020 CIVIL ENGINEERS	R100S RMRS Salaried	Linear	18.00	Hours
Factors	18 hrs					
	750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	70.00	Hours
Factors	70 hrs					
	750 STRAIGHT TIME BASE	P080 HEALTH PHYSICISTS	R100S RMRS Salaried	Linear	3.00	Hours
Factors	3 hrs					
	750 STRAIGHT TIME BASE	P090 INDUSTRIAL HYGIENISTS	R100S RMRS Salaried	Linear	33.00	Hours
Factors	33 hrs					
	750 STRAIGHT TIME BASE	T050 RADIATION CONTROL TECHNOLOGI	KG10H Remediation Steelworkers	Linear	16.00	Hours
Factors	16 Hours					
	A5H SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	32.167.00	Dollars
Factors	32167 sub/c support					

Line Item 0200 - French Drain Decommissioning

BOE	Estimators Experience - Estimated costs are based on experience from similar Environmental Restoration excavation projects. See Cost Estimate for OUI French Drain Decommissioning, April 11, 2000.											
	Decommissioning activities include: - Excavating and removing two submerged sump pumps and one water-level sensor standpipe, - Removing pipe and valves from one concrete vault, - Removing one monitoring well, - Excavating and installing a new outfall trench system, including piping, geotextile, geogrid, and drain rock, - Backfilling the trench and site grading, - Release survey/decon/demobilize heavy equipment and demobilize site.											
	Experience Item Desc - Trench 1, T-3/T-4, Ryan's Pit											
	Breakdown of Cost Data:											
	Item - RFETS Labor											
	Units - Hours											
	Unit Cost - 216											
	Unit Cost Adjustment factor - None											
	Revised Unit Cost - None											

WBS No: 1GAB0B04
Activity ID: 1G0FDR0035

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter * Starts In FY *

Basis for adjustment - None
Item - Subcontractor Costs
Units - lot
Unit Cost - \$39,780 sub/c
Revised Unit Cost - None
Basis for adjustment - None

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E020	CIVIL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors 40 hrs								
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	70.00	Hours
Factors 70 Hours								
750	STRAIGHT TIME BASE	E110	QUALITY CONTROL ENGINEERS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors 10 Hours								
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors 10 Hours								
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	34.00	Hours
Factors 34 hrs								
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KG10H	Remediation Steelworkers	Linear	52.00	Hours
Factors 52 Hours								
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	39.780.00	Dollars
Factors 39780 sub/c support								

Line Item 0300 - Site Restoration

BOE

Estimators Experience - Estimated costs are based on actual costs for revegetating the Trench 1 site. See Cost Estimate for OU1 French Drain Decommissioning, April 11, 2000.

Site revegetation will involve seed application, raking, and mulch application on all disturbed areas at the project site.

Experience Item Desc - Trench 1
Breakdown of Cost Data:
Item - RFETS Labor
Units - Hours
Unit Cost - 24
Unit Cost Adjustment factor - None
Revised Unit Cost - None
Basis for adjustment - None

Item - Subcontractor Costs
Units - lot
Unit Cost - \$4,563 sub/c
Revised Unit Cost - None
Basis for adjustment - None

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	24.00	Hours
Factors 24 hrs								
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	4.563.00	Dollars
Factors 4563 dollars sub/c								

Activity ID: 1G0FDR0040

Description: Prepare Closeout Report for OU-1 French Drain

Cost Risk 3 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	Develop Closeout Report	1.00	each	EE	104	104	2.844	1.260	0	4.104	1.369	5.473
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	175	175	0	175
Total for Activity 1G0FDR0040:						104	2.844	1.260	175	4.280	1.369	5.648

Line Item 0100 - Develop Closeout Report

BOE

Estimator's Experience on similar projects. See Cost Estimate for OU1 French Drain Decommissioning, April 11, 2000.

WBS No: 1GAB0B04
Activity ID: 1G0FDR0040

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Item Desc:
Develop Closeout report, perform data analysis, if required, including GIS data and associated project management.

Breakdown of Cost Data:
Item: RFETS labor to develop documentation
Units: hours
Unit Cost: 104
Unit Cost Adjustment Factor: none
Revised Unit Hours: None

Basis for adjustment: None

Item - Subcontractor costs for CAD/GIS
Units - lot
Unit Cost - \$1,260 sub/c
Revised Unit Cost - None
Basis for adjustment - None

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80 hrs							
750	STRAIGHT TIME BASE	E110	QUALITY CONTROL ENGINEERS	R100S	RMRS Salaried	Linear	4.00	Hours
Factors	4 Hours							
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	20.00	Hours
Factors	20 hrs							
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K265S	ER Programs	Linear	420.00	Dollars
Factors	6 dollars.cad/gis	70 \$/hr						
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	840.00	Dollars
Factors	20 hrs	42 estimated \$/hr						

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	103.49	Dollars
Factors	103.491 Dollars							
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	71.77	Dollars
Factors	71.7735 Dollars							

Activity ID: 1G1CAD0101 Description: OU1 CAD/ROD

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	CAD/ROD TECHNICAL SUPPORT	1.00	each	EE	250	250	7.390	0	0	7.390	3.376	10.766
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	703	703	0	703
Total for Activity 1G1CAD0101:						250	7.390	0	703	8.093	3.376	11.468

Line Item 0100 - CAD/ROD TECHNICAL SUPPORT

BOE

Estimators Experience - based generally on development of the OU3 CAD/ROD and FY00 OU1 CAD/ROD experience.

Experience Item Desc - Finalize amendment (Major Modification) to the OU1 CAD/ROD, Schedule Public presentation meeting and Public review/comment period, Hold Public Meeting, Hold Regulatory Agency/DOE meetings, Develop responses to Public comments, Publish Major Modification to OU1 CAD/ROD.

Breakdown of Cost Data:
Item - Site labor to support development of the OU1 CAD/ROD.
Units - Hours
Unit Cost - 250
Unit Cost Adjustment factor -
Revised Unit Cost -
Basis for adjustment -

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	250.00	Hours
Factors	250 HRS							

WBS No: 1GAB0B04
Activity ID: 1G1CAD0101

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	434.53	Dollars
Factors 434.533 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	268.27	Dollars
Factors 268.268 Dollars								

WBS No: 1GAB0B05 Title: Controls & Mitigating Measures

Activity ID: 1GCMM05001 Description: Project Management - A5 Dam

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0010	Project Management	1.00	each	HC	2.740	2.740	70.987	0	0	70.987	22.416	93.403
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	19.869	19.869	0	19.869
Total for Activity 1GCMM05001:						2.740	70.987	0	19.869	90.856	22.416	113.273

Line Item 0010 - Project Management

BOE

The following basis of estimate provides a description of hours/dollars necessary to perform budget preparation and management for the entire WADlet. Hours and dollars budgeted for this ongoing activity item are based on actual values needed to perform same activities during FY98 and FY99. Full time Project management support is required based on other similar projects = 1820 hours
1/4 time secretarial and budget analyst support is required for a project of this size based on other similar projects.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	460.00	Hours
Factors 460 hrs								
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	1,820.00	Hours
Factors 1820 hrs								
750	STRAIGHT TIME BASE	P070	COST ESTIMATORS PLANNERS AN	R100S	RMRS Salaried	Linear	460.00	Hours
Factors 460 hrs								

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	11.876	Dollars
Factors 11876.1 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	7.993	Dollars
Factors 7993.39 Dollars								

Activity ID: 1GCMM05100 Description: Prepare PAM & Working Documents - A5 Dam

Cost Risk 2 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	PAM	1.00	each	EE	740	740	23.428	0	0	23.428	8.106	31.534
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	8.830	8.830	0	8.830
Total for Activity 1GCMM05100:						740	23.428	0	8.830	32.258	8.106	40.364

Line Item 0100 - PAM

BOE

Estimator's Experience based generally on historical data for Ryan's Pit
Item Desc:
Preparation of PAM in support of source removal of previously characterized UBC.
Breakdown of Cost Data:
Item: Preparation of PAM for Ryan's Pit source removal action modified to include GIS support.
Units: hours
Unit Cost: 40 hours GIS support, 72 hours project manager technical support, 628 hours for technical staff to write document.
Unit Cost Adjustment Factor: None
Revised Unit Hours: None
Basis for adjustment. None

WBS No: 1GAB0B05
Activity ID: 1GCMM05100

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	628.00	Hours
	Factors 628 hrs								
	750	STRAIGHT TIME BASE	M020	MANAGERS (GRADE 69 - 72)	K253S	Remediation, Industrial & Site Serv	Linear	72.00	Hours
	Factors 72 hrs								
	750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried	Linear	40.00	Hours
	Factors 40 hrs								

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	6,412.05	Dollars
	Factors 6412.05 Dollars								
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	2,418.21	Dollars
	Factors 2418.21 Dollars								

Activity ID: 1GCMM05120 Description: PAM Document Revision - A5 Dam

Cost Risk 2 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
010	PAM revision	1.00	each	EE	120	120	3,205	0	0	3,205	1,109	4,314
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	1,208	1,208	0	1,208
Total for Activity 1GCMM05120:						120	3,205	0	1,208	4,413	1,109	5,522

Line Item 010 - PAM revision

BOE

Based on previous projects, minimal changes to the PAM will be required and will take approximately one week to resolve.
Two environmental engineers full time = 40 hours
Secretarial support for reformatting, copying, and editing = 20 hours
GIS support for redoing maps = 20 hours.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
	Factors 80 h								
	750	STRAIGHT TIME BASE	G010	ADMINISTRATIVE ASSISTANTS	R100S	RMRS Salaried	Linear	20.00	Hours
	Factors 20 h								
	750	STRAIGHT TIME BASE	P060	COMPUTER SYSTEMS ANALYSTS	R100S	RMRS Salaried	Linear	20.00	Hours
	Factors 20 h								

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	877.18	Dollars
	Factors 877.179 Dollars								
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	330.81	Dollars
	Factors 330.815 Dollars								

Activity ID: 1GCMM05150 Description: Biological Assessment - A5 Dam

Cost Risk 4 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0010	Biological Assessment	1.00	each	HC	100	100	2,956	131,093	0	134,049	1,023	135,072
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	38,619	38,619	0	38,619
Total for Activity 1GCMM05150:						100	2,956	131,093	38,619	172,668	1,023	173,691

Line Item 0010 - Biological Assessment

BOE

This task involves performing a Biological Assessment for the Pond A-5 Construction. This Biological Assessment must be reviewed by the regulators, which will issue a Biological Opinion.

100 Hours for R100S for task integration and oversight, issue resolution, and regulatory agency interface.

\$150,000 for a contractor to develop a Biological Assessment which addresses the cumulative effects, conditions forming the environmental baseline,

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Activity ID: 1GCMM05150

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evaluating potential ecological and sensitive habitat impacts. This cost was based on a conversation with Steve Nesta and Marcia Murdock.

\$5,000 for a Site Ecological contractor to assist in developing the Biological Assessment and to coordinate with the U.S. Fish and Wildlife Service on the species and habitat of concern.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	100.00 Hours
Factors		100	hrs				
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	126.864.00 Dollars
Factors		150000	\$				
					0.84576	[SYS 061400]	.84576000 - System
A5H	SUBCONTRACTED SRVS	0000	NONE	K266S	Envir. Safety. Health & Quality	Linear	4.228.80 Dollars
Factors		5000	\$				
					0.84576	[SYS 061400]	.84576000 - System

Line Item SYS - Contingency And Escalation

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	28.261.47 Dollars
Factors		28261.5	Dollars				
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	10.358.00 Dollars
Factors		10358	Dollars				

Activity ID: 1GCMM05160 Description: Environmental Assessment - A5 Dam

Cost Risk 3 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0010	Environmental Assessment	1.00	each	HC	100	100	2,956	131,093	0	134,049	997	135,046
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	33,301	33,301	0	33,301
Total for Activity 1GCMM05160:						100	2,956	131,093	33,301	167,350	997	168,348

Line Item 0010 - Environmental Assessment

BOE

This task involves performing a Biological Assessment for the Pond A-5 Construction. This Biological Assessment must be reviewed by the regulators, which will issue a Biological Opinion.

100 Hours for R100S for task integration and oversight, issue resolution, and regulatory agency interface.

\$150,000 for a contractor to develop a Biological Assessment which addresses the cumulative effects, conditions forming the environmental baseline, evaluating potential ecological and sensitive habitat impacts. This cost was based on a conversation with Steve Nesta and Marcia Murdock.

\$5,000 for a Site Ecological contractor to assist in developing the Biological Assessment and to coordinate with the U.S. Fish and Wildlife Service on the species and habitat of concern.

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	100.00 Hours
Factors		100	hours				
A5H	SUBCONTRACTED SRVS	0000	NONE	K109S	Env Sys. Stewardship & Compliance	Linear	4.228.80 Dollars
Factors		5000	\$				
					0.84576	[SYS 061400]	.84576000 - System
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	126.864.00 Dollars
Factors		150000	\$				
					0.84576	[SYS 061400]	.84576000 - System

Line Item SYS - Contingency And Escalation

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
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WBS No: 1GAB0B05
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CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	22,595.78	Dollars
Factors 22595.8 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	10,705.50	Dollars
Factors 10705.5 Dollars								

Activity ID: 1GCMM05170 Description: Mitigation Measures

Cost Risk 4 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
001	Mitigating Measure	1.00	each	EE	0	0	0	211,440	0	211,440	0	211,440
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	30,912	30,912	0	30,912
Total for Activity 1GCMM05170:						0	0	211,440	30,912	242,352	0	242,352

Line Item 001 - Mitigating Measure

BOE	Estimators Experience - Professional opinion of Steve Nesta, KH NEPA manager and expert. Based on his best guess of the measures required given that the dam will be constructed in areas of known Preble's Mouse habitat. Experience Item Desc - Mitigating measures Breakdown of Cost Data: Item - 1 Units - each Unit Cost - \$250,000 Unit Cost Adjustment factor - none Revised Unit Cost - Basis for adjustment - This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
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Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	A5H	SUBCONTRACTED SRVS	0000	NONE	K253S	Remediation, Industrial & Site Serv	Linear	211.440.00	Dollars
	Factors 250000 d								

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Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	10.610.42	Dollars
	Factors 10610.4 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	20.301.68	Dollars
	Factors 20301.7 Dollars									

Activity ID: 1GCMM05200 Description: Develop Title I & II Design - A5 Dam

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
30	Perform Title I,II,III Design	1.00	ls	EE	480	480	13,442	141,742	0	155,184	4,651	159,834
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	44,757	44,757	0	44,757
Total for Activity 1GCMM05200:						480	13,442	141,742	44,757	199,941	4,651	204,591

Line Item 30 - Perform Title I,II,III Design

BOE	Item Desc - Title I,II,III Design Breakdown of Historical Data: Item - Title I,II,III Design -based on the design cost for the East Trenches Plume Project Units - lot Unit Cost - 167,000 dollars based on the OHM/Parson Subcontract 3 people 160 hours each for review, comment, site engineering interface to meet Site requirements, \$500 for copying and other supplies. Unit Cost Adjustment factor - Revised Unit Cost - N/A Basis for adjustment - N/A This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
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Resources	Cost Element	Skill	Department	Curve	Quantity	Units
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WBS No: 1GAB0B05
Activity ID: 1GCMM05200

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project
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Starts In FY *

750	STRAIGHT TIME BASE	E020	CIVIL ENGINEERS	K253S	Remediation, Industrial & Site Serv	Linear	160.00	Hours
Factors	160	hours						
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	320.00	Hours
Factors	320	hours						
A5C	SUPPLIES	0000	NONE	K253S	Remediation, Industrial & Site Serv	Linear	500.00	Dollars
Factors	500	Dollars/lb						
A5H	SUBCONTRACTED SRVS	P050	COMPLIANCE INSPECTORS	K253S	Remediation, Industrial & Site Serv	Linear	141.241.90	Dollars
Factors	167000	subc support						

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	32,500.14	Dollars
	Factors 32500.1 Dollars								
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	12,256.94	Dollars
	Factors 12256.9 Dollars								

Activity ID: 1GCMM05250 Description: Procurement Contractor Selection - A5 Dam

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0100	Procurement/Contractor Selection	1.00	each	EE	480	480	13.250	0	0	13.250	4.584	17.834
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	4.944	4.944	0	4.944
Total for Activity 1GCMM05250:						480	13.250	0	4.944	18.194	4.584	22.778

Line Item 0100 - Procurement/Contractor Selection

BOE

This activity involves the project bid phase to subcontract construction of the A-5 daum at Indiana Street. This activity includes issuing the Bidding Requirements, Contract Forms, Conditions of the Contract, and Specifications for the sediment removal project.

160 Hours for statement of work preparation, review of bids, conducting Site walkdown for prospective bidders, and integrating Health and Safety requirements into the Bid Package.

It was assumed that only one Procurement/Contractor Selection activity would be required.

160 Hours for Engineering construction requirements interpretation, bid technical review, identification of construction specification requirements, providing numerous copies of Contract Drawings, and review/approval of Design drawings.

160 hours for Procurement to issue bid notices, provide construction requirements interpretation, received bid cost review, providing numerous copies of Contract Bid Packages, conducting prospective bidders conference, review and approval of Contract Award, and performance of contract addenda and revisions.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E020	CIVIL ENGINEERS	R100S	RMRS Salaried	Linear	160.00	Hours
	Factors	160 hrs							
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	160.00	Hours
	Factors	160 hrs							
	750	STRAIGHT TIME BASE	P030	BUYERS PROCUREMENT AND CON	K216S	Subcontracts Management	Linear	160.00	Hours
	Factors	160 hrs							

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	3,576.81	Dollars
	Factors 3576.81 Dollars								
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1,367.60	Dollars
	Factors 1367.60 Dollars								

Activity ID: 1GCMM05260 Description: Prepare Field Plans - A5 Dam

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
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WBS No: 1GAB0B05
Activity ID: 1GCMM05260

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

0025	Health and Safety Plan	1.00	each	HC	50	50	1.684	6.089	0	7.773	583	8.356
0050	Field Implementation Plan	1.00	each	HC	60	60	2.251	14.716	0	16.968	779	17.747
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	7.309	7.309	0	7.309
Total for Activity 1GCMM05260:						110	3.935	20.806	7.309	32.050	1.362	33.412

Line Item 0025 - Health and Safety Plan

BOE	The subcontractor working on the A-5 dam project must develop a Health and Safety Plan acceptable to the Site. This task will be performed by subcontract personnel with Site input. Historical Data Source - Successful subcontract bid for the East Trenches Plume project. Breakdown of Historical Data: Item - health and safety plan Units - 1 Unit Cost - \$7,200 (from successful bidder) Unit Cost Adjustment factor - none Revised Unit Cost - Basis for adjustment - 40 hours IH support and 10 hours rad engineer support are required based on previous experience with the East Trenches Plume Project. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.											
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Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	P080 HEALTH PHYSICISTS	R100S RMRS Salaried	Linear	10.00	Hours
Factors	10 hrs					
	750 STRAIGHT TIME BASE	P090 INDUSTRIAL HYGIENISTS	R100S RMRS Salaried	Linear	40.00	Hours
Factors	40 hrs					
	A5H SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	6.089.47	Dollars
Factors	7200 d					

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Line Item 0050 - Field Implementation Plan

BOE	The Field Implementation Plan will delineate the placement of any soil stockpile, the rip-rap stockpile, and will identify the disposition process for any accumulated water. This activity will develop the Plan for construction of the A-5 dam. Historical Data Source - Successful Bid for East Trenches Plume Project Item Desc - Field Implementation Plan Breakdown of Historical Data: Item - FIP Units - 1 Unit Cost - \$17,400 based on the subcontract bid. Unit Cost Adjustment factor - none Revised Unit Cost - Basis for adjustment - 40 hours environmental engineer and 20 hours project management support for document reviews, issue resolution will be required based on the East Trenches Plume project. This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.											
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Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	E050 ENVIRONMENTAL ENGINEERS	R100S RMRS Salaried	Linear	40.00	Hours
Factors	40 h					
	750 STRAIGHT TIME BASE	M020 MANAGERS (GRADE 69 - 72)	R100S RMRS Salaried	Linear	20.00	Hours
Factors	20 hrs					
	A5H SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	14.716.22	Dollars
Factors	17400 d					

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources	<i>Cost Element</i>	<i>Skill</i>	<i>Department</i>	<i>Curve</i>	<i>Quantity</i>	<i>Units</i>
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WBS No: 1GAB0B05
Activity ID: 1GCMM05260

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Project Baseline Devl
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Activity Filter *

Starts In FY *

CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	5,307.64	Dollars
Factors 5307.64 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	2,001.70	Dollars
Factors 2001.7 Dollars								

Activity ID: 1GCMM05270 Description: Readiness Assessment - A5 Dam

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0010	Readiness Assessment/IWCP	1.00	each	HC	140	140	4,440	23,258	0	27,698	1,536	29,234
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	8,105	8,105	0	8,105
Total for Activity 1GCMM05270:						140	4,440	23,258	8,105	35,803	1,536	37,339

Line Item 0010 - Readiness Assessment/IWCP

BOE
This task involves developing an Integrated Work Control Package for the field activities, and training subcontract workers.
Hours are included for task integration and oversight, documentation development, and issue resolution for the readiness assessment.
\$27,500 for contractor to assist in developing the IWCP, perform pre-job evolutions, make notifications per IWCP and obtain Site-specific worker training.
This amount is from the successful bidder for the East Trenches Plume project
This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
	Factors 80 Hrs								
	750	STRAIGHT TIME BASE	E110	QUALITY CONTROL ENGINEERS	R100S	RMRS Salaried	Linear	20.00	Hours
	Factors 20 h								
	750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	20.00	Hours
	Factors 20 h								
	750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	20.00	Hours
	Factors 20 h								
	A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	23,258.40	Dollars
Factors 27500 \$									

0.84576 [SYS 061400] .84576000 - System

Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	5,863.23	Dollars
	Factors 5863.24 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	2,241.82	Dollars
	Factors 2241.83 Dollars									

Activity ID: 1GCMM05280 Description: Field Preparation - A5 Dam

Cost Risk 1 Schedule Risk 1

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
010	Site Preparation	1.00	each	HC	180	180	4,976	13,617	0	18,593	1,548	20,141
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	4,141	4,141	0	4,141
Total for Activity 1GCMM05280:						180	4,976	13,617	4,141	22,733	1,548	24,281

Line Item 010 - Site Preparation

BOE
Historical Data Source - Field preparation and mobilization costs were derived from the East Trenches Plume Project.
Item Desc -
Breakdown of Historical Data:
Item - Subcontract Bid was \$16,100 to mobilize personnel to the Site.
Based on the East Trenches Plume Project, support includes a fulltime RCT, 2 fulltime project engineer support personnel, 1 fulltime project manager and a halftime health and safety support.
Units - dollars/hours
Unit Cost - \$16,100/ 40 hours RCT support, 80 hours Env. Eng, 40 hours project management and 20 hours health and safety support

WBS No: 1GAB0B05
Activity ID: 1GCMM05280

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter * Starts In FY *

Unit Cost Adjustment factor - none

Revised Unit Cost -
Basis for adjustment -

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors 80 h								
750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	40.00	Hours
Factors 40 h								
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	R100S	RMRS Salaried	Linear	20.00	Hours
Factors 20 h								
750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLOGI	KG10H	Remediation Steelworkers	Linear	40.00	Hours
Factors 40 h								
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	13.616.74	Dollars
Factors 16100 d								

0.84576 [SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	2,385.35	Dollars
Factors 2385.35 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	1,755.34	Dollars
Factors 1755.34 Dollars								

Activity ID: 1GCMM05290 Description: Construction - A5 Dam

Cost Risk 4 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
0030	Construction	1.00	each	TP	2,430	2,430	72,986	4,382,294	0	4,455,280	20,582	4,475,862
0040	Site Restoration	1.00	each	VQ	170	170	4,862	17,507	0	22,369	1,371	23,740
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	657,833	657,833	0	657,833
Total for Activity 1GCMM05290:						2,600	77,848	4,399,801	657,833	5,135,482	21,953	5,157,435

Line Item 0030 - Construction

BOE

Construction subcontract cost from "Source Control Alternatives Analysis: Phase 1 Report, Predecisional Draft" RF/RMRS-98-271.UN September 1998

As quoted on Alternative 6 page 1, Detention Pond is estimated at \$5,181,486. Backup is provided in the report.

Based on similar projects such as the plumes remedial actions, oversight requirements are two full time field supervisors 120 days * 9 * 2 = 2,160 hours
1/4 time Site health and safety support = 120 * 9 * .25% = 270 hours

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	2,160.00	Hours
Factors 2160 hrs								
750	STRAIGHT TIME BASE	P090	INDUSTRIAL HYGIENISTS	K253S	Remediation, Industrial & Site Serv	Linear	270.00	Hours
Factors 270 hrs								
A5H	SUBCONTRACTED SRVS	0000	NONE	K253S	Remediation, Industrial & Site Serv	Linear	4,382,294.00	Dollars
Factors 5181486 dollars								

0.84576 [SYS 061400] .84576000 - System

Line Item 0040 - Site Restoration

BOE

Site Restoration involves the below key activities:

1) Contractor demobilization
2) Regrading and Revegetation

WBS No: 1GAB0B05
Activity ID: 1GCMM05290

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Vendor Name - OHM, successful bidder on East Trenches Plume Project
Vendor Quote - 20,700 for demobilization and revegetation/regrading
Quote Received by - A. Primrose
Date Received - 10/6/98
Item being quoted - demobilization, regrade and revegetation
Other Info -
Availability -

Site support fo r project - 60 hours civil engineer, 80 hours env. Scientist, 30 hours other professional

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E020	CIVIL ENGINEERS	R100S	RMRS Salaried	Linear	60.00 Hours
Factors		60	hrs				
750	STRAIGHT TIME BASE	P170	OTHER ADMINISTRATIVE & PROFE	R100S	RMRS Salaried	Linear	30.00 Hours
Factors		30	hrs				
750	STRAIGHT TIME BASE	S020	ENVIRONMENTAL SCIENTISTS	R100S	RMRS Salaried	Linear	80.00 Hours
Factors		80	hrs				
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	17.507.23 Dollars
Factors		20700	\$				

0.84576 [SYS 061400] .84576000 - Svstem

Line Item SYS - Contingency And Escalation

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	225.797.80 Dollars
Factors		225798	Dollars				
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	432.035.00 Dollars
Factors		432035	Dollars				

Activity ID: 1GCMM05295 Description: Closeout Report- A5 Dam

Cost Risk 1 Schedule Risk 3

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
100	Prepare Closure Report	1.00	ea	EE	160	160	4.730	0	0	4.730	1.334	6.063
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	866	866	0	866
Total for Activity 1GCMM05295:						160	4.730	0	866	5.595	1.334	6.929

Line Item 100 - Prepare Closure Report

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	160.00 Hours
Factors		160	Hours				

BOE

Item Desc - Project Closure Report
Breakdown of Historical Data: Based on similar reports for construction projects.
Item - Project Closure Report
Units - lot
Unit Cost - 160 hours
Unit Cost Adjustment factor - N/A
Revised Unit Cost - N/A
Basis for adjustment - N/A

Line Item SYS - Contingency And Escalation

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	283.59 Dollars
Factors		283.589	Dollars				
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	582.18 Dollars
Factors		582.18	Dollars				

WBS No: 1GAB0B06
Activity ID: 1GAB0B0610

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter * Starts In FY *

WBS No:	1GAB0B06	Title:	Reactive Barrier Systems Monitoring & Ma									
Activity ID:	1GAB0B0610	Description:	EM-50 Passive Reactive Barrier Plume Sampling									
								Cost Risk	1	Schedule Risk	1	
Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
10	Additional Monitoring/Reporting	1.00	each		160	160	8,552	77,014	0	85,566	14,434	100,000
Total for Activity 1GAB0B0610:						160	8,552	77,014	0	85,566	14,434	100,000

Line Item 10 - Additional Monitoring/Reporting

BOE	Item Desc:	Sampling requirements were derived from conversations with Leslie Dunstan RMRS SW Sampling coordinator, and Steve Singer, RMRS GW Monitoring Manager										
	Breakdown of Cost Data:											
	Item:	Analytical Services										
	Units:	Dollars										
	Unit Cost:	35k										
	Unit Cost Adjustment Factor:											
	Revised Unit Hours:	n/a										
	Breakdown of Cost Data:											
	Item:	Monitoring Services										
	Units:	Dollars										
	Unit Cost:	35k										
	Unit Cost Adjustment Factor:											
	Revised Unit Hours:	n/a										
	160 hours are required to attend meetings, prepare additional reports and graphics, interface with other Sites and prepare presentations.											
	Two trips at \$7014 are required.											

Resources		Cost Element	Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE		M020	MANAGERS (GRADE 69 - 72)	K253S	Remediation, Industrial & Site Serv	Linear	160.00	Hours
Factors	160	PM hours							
A5H	SUBCONTRACTED SRVS		0000	NONE	K253S	Remediation, Industrial & Site Serv	Linear	70,000.00	Dollars
Factors	70000	dollars							
A5M	TRAVEL/TRAIN/RELOCAT		0000	NONE	K253S	Remediation, Industrial & Site Serv	Linear	7,014.00	Dollars
Factors	7014	Travel							

WBS No:	1GAB0C02	Title:	Buffer Zone ROD(s) - (Interim/Final ROD)									
Activity ID:	1GFR000010	Description:	Develop Interim Final CAD/ROD Scope									
								Cost Risk	4	Schedule Risk	3	
Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
011	Develop Scope	1.00	each	EE	1,500	1,500	51,525	114,757	0	166,282	24,577	190,859
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	10,394	10,394	0	10,394
Total for Activity 1GFR000010:						1,500	51,525	114,757	10,394	176,676	24,577	201,253

Line Item 011 - Develop Scope

BOE	Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site characterization and dispositioning.
	Experience Item Desc - Develop scope for interim CAD/ROD, meet with agencies, develop annotated outline for CAD/ROD.
	Breakdown of Cost Data:
	Item - Labor, subcontract dollars, supplies, and travel to support development of the interim CAD/ROD.
	Units - lot
	Unit Cost -Site hours:1500 Subcontract dollars:\$136680 Travel to meetings: \$1000
	Document production Supplies: \$1000
	Unit Cost Adjustment factor -None
	Revised Unit Cost - none
	Basis for adjustment - none
This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.	

Resources	Cost Element	Skill		Department		Curve	Quantity	Units
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WBS No: 1GAB0C02
Activity ID: 1GFR000010

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project
WBS Filter
Activity Filter
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750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	K260S	Site Operations	Linear	240.00	Hours
Factors	240	Hours	1	Nick Demos				
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K281S	Building 771 Closure Project	Linear	240.00	Hours
Factors	240	hours	1	D&D				
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	240.00	Hours
Factors	240	hours	1	D&D				
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K253S	Remediation, Industrial & Site Serv	Linear	40.00	Hours
Factors	40	Hours	1	Steve Sinder				
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	100.00	Hours
Factors	100	Hours						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	240.00	Hours
Factors	240	Hours	1	Rick Roberts				
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	160.00	Hours
Factors	160	Hours	1	B.Fiehwea				
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	240.00	Hours
Factors	240	Hours	1	Win Chromec				
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	1,000.00	Dollars
Factors	1000	Dollars		Document Production Supplies				
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	4,059.65	Dollars
Factors	80	Hours	60	\$/Hr facilitator				
						0.84576	ISYS 0614001	.84576000 - System
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	16,238.59	Dollars
Factors	240	Hours	80	\$/hr Susan Serrez				
						0.84576	ISYS 0614001	.84576000 - System
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	32,477.18	Dollars
Factors	480	Hours	80	\$/hr senior technical support				
						0.84576	ISYS 0614001	.84576000 - System
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	K265S	ER Programs	Linear	10,149.12	Dollars
Factors	240	Hours	50	\$/Hr S. Luker				
						0.84576	ISYS 0614001	.84576000 - System
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	12,178.94	Dollars
Factors	480	Hours	30	\$/Hr				
						0.84576	ISYS 0614001	.84576000 - System
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K265S	ER Programs	Linear	14,208.77	Dollars
Factors	240	Hours	70	\$/Hr Data analysis				
						0.84576	ISYS 0614001	.84576000 - System
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K267S	Analytical Laboratory Services	Linear	3,552.19	Dollars
Factors	60	Hours	70	\$/hr W. Cheeks				
						0.84576	ISYS 0614001	.84576000 - System
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K267S	Analytical Laboratory Services	Linear	14,208.77	Dollars
Factors	240	Hours	70	\$/hr GIS				
						0.84576	ISYS 0614001	.84576000 - System
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	1,420.88	Dollars
Factors	40	Hours	42	\$/hr A. Horn				
						0.84576	ISYS 0614001	.84576000 - System
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	4,262.63	Dollars
Factors	120	Hours	42	\$/hr				
						0.84576	ISYS 0614001	.84576000 - System
A5M	TRAVEL/TRAIN/RELOCAT	0000	NONE	K265S	ER Programs	Linear	1,000.00	Dollars
Factors	1000	Dollars		Travel				

Line Item SYS - Contingency And Escalation

BOE

Resources	Cost Element	Skill	Department	Curve	Quantity	Units
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WBS No: 1GAB0C02
Activity ID: 1GFR000010

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Baseline Cost and Basis of Estimate

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Activity Filter *

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CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	6,380.74	Dollars
Factors 6380.74 Dollars								
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	4,013.33	Dollars
Factors 4013.34 Dollars								

Activity ID: 1GFR000030 Description: Procurement of Interim CAD/ROD Subcontract

Cost Risk 1 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
031	write statement of work	1.00	each	EE	165	165	5,623	5,785	0	11,408	2,682	14,090
032	Procurement of subcontracted services	1.00	each	EE	115	115	3,924	16,315	0	20,239	1,872	22,111
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	1,919	1,919	0	1,919
Total for Activity 1GFR000030:						280	9,548	22,100	1,919	33,567	4,554	38,121

Line Item 031 - write statement of work

BOE	Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site characterization and dispositioning. Experience Item Desc - Develop SOW for technical support for Interim CAD/ROD. Breakdown of Cost Data: Item - Labor and subcontract dollars to support writing SOW for procurment of the technical assistance for production of Interim CAD/ROD. Units - lot Unit Cost -Site hours:165 Subcontract dollars:\$6840 Unit Cost Adjustment factor -none Revised Unit Cost - none Basis for adjustment - none This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
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Resources	Cost Element	Skill	Department	Curve	Quantity	Units
	750 STRAIGHT TIME BASE	M040 MANAGERS (GRADE 64 - 68)	K265S ER Programs	Linear	15.00	Hours
Factors 15 Hours						
	750 STRAIGHT TIME BASE	P030 BUYERS PROCUREMENT AND CON	K264S Procurement Systems	Linear	30.00	Hours
Factors 30 Hours						
	750 STRAIGHT TIME BASE	P080 HEALTH PHYSICISTS	R100S RMRS Salaried	Linear	60.00	Hours
Factors 60 Hours 1 R. Roberts						
	750 STRAIGHT TIME BASE	S090 OTHER SCIENTISTS	R100S RMRS Salaried	Linear	60.00	Hours
Factors 60 Hours 1 W. Chromec						
	A5H SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	710.44	Dollars
Factors 20 Hours 42 \$/hrA. Horn						
	A5H SUBCONTRACTED SRVS	0000 NONE	K265S ER Programs	Linear	2,029.82	Dollars
Factors 30 Hours 80 \$/hr S. Serrez						
	A5H SUBCONTRACTED SRVS	G010 ADMINISTRATIVE ASSISTANTS	K265S ER Programs	Linear	3,044.74	Dollars
Factors 120 Hours 30 \$/hr						
0.84576 [SYS 061400] .84576000 - System						
0.84576 [SYS 061400] .84576000 - Svsstem						

Line Item 032 - Procurement of subcontracted services

BOE	Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site characterization and dispositioning. Experience Item Desc - Develop SOW for technical support for Interim CAD/ROD. Breakdown of Cost Data: Item - Labor and subcontract dollars to support writing SOW for procurment of the technical assistance for production of Interim CAD/ROD. Units - lot Unit Cost -Site hours:115 Subcontract dollars:\$19290 Unit Cost Adjustment factor -none Revised Unit Cost - none Basis for adjustment - none This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
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Resources	Cost Element	Skill	Department	Curve	Quantity	Units
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WBS No: 1GAB0C02
Activity ID: 1GFR000030

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project
WBS Filter
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Starts In FY *

750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	15.00	Hours
Factors	15	Hours						
750	STRAIGHT TIME BASE	P030	BUYERS PROCUREMENT AND CON	K264S	Procurement Systems	Linear	40.00	Hours
Factors	40	Hours						
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	60.00	Hours
Factors	60	Hours	1 W. Chromec					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	4.059.65	Dollars
Factors	60	Hours	80 \$/hr senior technical support					
							0.84576	[SYS 061400] .84576000 - Svsstem
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	11.367.01	Dollars
Factors	448	Hours	30 \$/hr					
							0.84576	[SYS 061400] .84576000 - Svsstem
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	888.05	Dollars
Factors	25	Hours	42 \$/Hr					
							0.84576	[SYS 061400] .84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	1.158.01	Dollars
Factors	1158.01 Dollars							
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	761.24	Dollars
Factors	761.237 Dollars							

Activity ID: 1GFR000040 Description: Develop Draft Proposed Plan

Cost Risk 3 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
41	Develop and write Draft Proposed Plan	1.00	each	EE	2.480	2.480	85.118	211.004	0	296.122	36.016	332.138
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	30.719	30.719	0	30.719
Total for Activity 1GFR000040:						2.480	85.118	211.004	30.719	326.841	36.016	362.857

Line Item 41 - Develop and write Draft Proposed Plan

BOE

Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site characterization and dispositioning.

Experience Item Desc - Write and produce draft Proposed Plan.

Breakdown of Cost Data:

Item - Labor, subcontract dollars, and supplies to support writing and production production of draft Proposed Plan.

Units - lot

Unit Cost -Site hours:2480 Subcontract dollars:\$247120 Document Production Supplies: \$2000

Unit Cost Adjustment factor -none

Revised Unit Cost - none

Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element			Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE		E050	ENVIRONMENTAL ENGINEERS	K260S	Site Operations	Linear	400.00	Hours
Factors	400	Hours	1 N. Demos						
750	STRAIGHT TIME BASE		E130	OTHER ENGINEERS	K311S	D&D Program	Linear	400.00	Hours
Factors	400	Hours	D&D						
750	STRAIGHT TIME BASE		E130	OTHER ENGINEERS	K311S	D&D Program	Linear	400.00	Hours
Factors	400	Hours	D&D						
750	STRAIGHT TIME BASE		M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	200.00	Hours
Factors	200	Hours							
750	STRAIGHT TIME BASE		M040	MANAGERS (GRADE 64 - 68)	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	Hours	1 S. Singer						
750	STRAIGHT TIME BASE		P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	400.00	Hours
Factors	400	Hours	1 R. Roberts						

WBS No: 1GAB0C02
Activity ID: 1GFR00040

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	200.00	Hours
Factors	200	Hours	1	B. Fiehwea				
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	400.00	Hours
Factors	400	Hours		W. Chromec				
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	2,000.00	Dollars
Factors	2000	Dollars		Document Production Supplies				
A5H	SUBCONTRACTED SRVS	0000	NONE	K253S	Remediation, Industrial & Site Serv	Linear	4,228.80	Dollars
Factors	5000	\$		NEPA support				
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	20,298.24	Dollars
Factors	400	Hours	60	\$/Hr technical support				
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	70,367.23	Dollars
Factors	1040	Hours	80	\$/Hr senior technical support				
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	27,064.32	Dollars
Factors	400	Hours	80	\$/Hr S. Serrez				
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	4,059.65	Dollars
Factors	80	Hours	60	\$/Hr facilitator				
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	26,387.71	Dollars
Factors	1040	Hours	30	\$/Hr				
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K265S	ER Programs	Linear	17,760.96	Dollars
Factors	300	Hours	70	\$/Hr Data analysis				
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K267S	Analytical Laboratory Services	Linear	4,736.26	Dollars
Factors	80	Hours	70	\$/hr W. Cheeks				
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K267S	Analytical Laboratory Services	Linear	17,760.96	Dollars
Factors	300	Hours	70	\$/hr GIS				
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	7,104.38	Dollars
Factors	200	Hours	42	\$/Hr A. Horn				
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	9,235.70	Dollars
Factors	260	Hours	42	\$/Hr				
0.84576 [SYS 061400] .84576000 - Svstem								

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	20,092.39	Dollars
Factors	20092.4	Dollars						
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	10,626.24	Dollars
Factors	10626.2	Dollars						

Activity ID: 1GFR000110 Description: Revise Draft Proposed Plan

Cost Risk 3 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
101	Respond to DOE Comments and Revise	1.00	each	EE	155	155	5,368	19,994	0	25,362	1,895	27,257
111	Response to Agency comments	1.00	each	EE	520	520	17,922	26,450	0	44,372	6,326	50,698
112	Comment resolution	1.00	each	EE	315	315	10,651	16,467	0	27,118	3,760	30,878

WBS No: 1GAB0C02
Activity ID: 1GFR000110

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

113	Respond to DOE Comments and revise Proposed Plan	1.00	each	EE	95	95	3.313	15.477	0	18.791	1.170	19.960
114	Revise Draft Proposed Plan	1.00	each	EE	485	485	16.682	39.068	0	55.750	5.889	61.639
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	29.067	29.067	0	29.067
Total for Activity 1GFR000110:						1.570	53.937	117.456	29.067	200.460	19.040	219.499

Line Item 101 - Respond to DOE Comments and Revise

BOE

Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site characterization and dispositioning.

Experience Item Desc - Respond to DOE comments on draft Proposed plan, revise and produce draft Proposed Plan.

Breakdown of Cost Data:

Item - Labor and subcontract dollars to support responding to comments, revising and production production of draft Proposed Plan.

Units - lot

Unit Cost -Site hours: 155 Subcontract dollars:\$23640

Unit Cost Adjustment factor -none

Revised Unit Cost - none

Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element			Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried		Linear	20.00	Hours
Factors	20	Hours	N. Demos						
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program		Linear	20.00	Hours
Factors	20	Hours	D&D						
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program		Linear	20.00	Hours
Factors	20	Hours	D&D						
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs		Linear	15.00	Hours
Factors	15	Hours							
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried		Linear	30.00	Hours
Factors	30	Hours	R.Roberts						
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried		Linear	30.00	Hours
Factors	30	Hours	W. Chromec						
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried		Linear	20.00	Hours
Factors	20	Hours	B. Fiehwea						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs		Linear	10,825.73	Dollars
Factors	160	Hours	80 \$/hr SeniorTech. Support						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs		Linear	2,029.82	Dollars
Factors	30	Hours	80 \$/Hr senior technical support						
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	K265S	ER Programs		Linear	355.22	Dollars
Factors	10	Hours	42 \$/HR S. Luker						
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs		Linear	4,059.65	Dollars
Factors	160	Hours	30 \$/hr						
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K253S	Remediation, Industrial & Site Serv		Linear	1,480.08	Dollars
Factors	25	Hours	70 \$/hr GIS						
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs		Linear	532.83	Dollars
Factors	15	Hours	42 \$/hr						
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs		Linear	710.44	Dollars
Factors	20	Hours	42 \$/Hr						
0.84576 [SYS 061400] .84576000 - Svstem									

Line Item 111 - Response to Agency comments

BOE

WBS No: 1GAB0C02
Activity ID: 1GFR000110

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site cvaracterization and dispositioning.

Experience Item Desc - Respond to agency comments on the draft Proposed Plan.

Breakdown of Cost Data:

Item - Labor, subcontract dollars, and supplies to support responding to agency comments on the draft Proposed Plan.

Units - lot

Unit Cost -Site hours: 520 Subcontract dollars:\$27100 Travel to Meetings: \$500

Document Production Supplies: \$1000

Unit Cost Adjustment factor -none

Revised Unit Cost - none

Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	Hours	N. Demos					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	80.00	Hours
Factors	80	Hours	D&D					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	80.00	Hours
Factors	80	Hours	D&D					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	40.00	Hours
Factors	40	Hours						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	Hours	R.Roberts					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	Hours	W. Chromec					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	Hours	B. Fiehwea					
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	1,000.00	Dollars
Factors	1000	Dollars	Document Production					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2,706.43	Dollars
Factors	40	Hours	80 \$/Hr senior technical support					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	10,825.73	Dollars
Factors	160	Hours	80 \$/Hr senior technical support					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2,029.82	Dollars
Factors	40	Hours	60 \$/Hr technical support					
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	K265S	ER Programs	Linear	1,420.88	Dollars
Factors	40	Hours	42 \$/HR S. Luker					
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	4,059.65	Dollars
Factors	160	Hours	30 \$/Hr					
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K253S	Remediation, Industrial & Site Serv	Linear	1,776.10	Dollars
Factors	30	Hours	70 \$/hr GIS					
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	710.44	Dollars
Factors	20	Hours	42 \$/hr					
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	1,420.88	Dollars
Factors	40	Hours	42 \$/Hr					
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WBS No: 1GAB0C02
Activity ID: 1GFR000110

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project
WBS Filter
Activity Filter
Baseline Devl
1GAB
*

Starts In FY *

A5M	TRAVEL/TRAIN/RELOCAT	0000	NONE	K265S	ER Programs	Linear	500.00	Dollars
Factors	500	Dollars	Travel to meetings					

Line Item 112 - Comment resolution

BOE

Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site cvaracterization and dispositioning.

Experience Item Desc - Comment-Response resolution for agency comments on the draft Proposed Plan.

Breakdown of Cost Data:

Item - Labor and subcontract dollars to support comment-response resolution for agency comments on the draft Proposed Plan.

Units - lot

Unit Cost -Site hours: 315 Subcontract dollars:\$19470

Unit Cost Adjustment factor -none

Revised Unit Cost - none

Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	60.00	Hours
Factors	60	Hours	N. Demos					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	60.00	Hours
Factors	60	Hours	D&D					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	60.00	Hours
Factors	60	Hours	D&D					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	15.00	Hours
Factors	15	Hours						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	60.00	Hours
Factors	60	Hours	R. Roberts					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	60.00	Hours
Factors	60	Hours	W. Chromec					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	3,044.74	Dollars
Factors	60	Hours	60 \$/Hr facilitator					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	5,412.86	Dollars
Factors	80	Hours	80 \$/Hr senior technical support					
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	K265S	ER Programs	Linear	1,065.66	Dollars
Factors	30	Hours	42 \$/Hr S. Luker					
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	2,029.82	Dollars
Factors	80	Hours	30 \$/hr					
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K253S	Remediation, Industrial & Site Serv	Linear	888.05	Dollars
Factors	15	Hours	70 \$/Hr W. Cheeks					
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K253S	Remediation, Industrial & Site Serv	Linear	1,776.10	Dollars
Factors	30	Hours	70 \$/Hr GIS					
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K265S	ER Programs	Linear	1,184.06	Dollars
Factors	20	Hours	70 \$/HrData Analysis					
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	710.44	Dollars
Factors	20	Hours	42 \$/Hr					
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	355.22	Dollars
Factors	10	Hours	42 \$/hr					

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WBS No: 1GAB0C02
Activity ID: 1GFR000110

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Line Item 113 - Respond to DOE Comments and revise Proposed Plan

BOE	Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site cvaracterization and dispositioning. Experience Item Desc - Response to DOE comments, resolve, and revise draft Proposed Plan. Breakdown of Cost Data: Item - Labor and subcontract dollars to response to DOE comments, resolve, and revise the draft Proposed Plan. Units - lot Unit Cost -Site hours: 95 Subcontract dollars:\$18300 Unit Cost Adjustment factor -none Revised Unit Cost - none Basis for adjustment - none This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.
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Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	10 Hours		N. Demos					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	10.00	Hours
Factors	10 Hours		D&D					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	10.00	Hours
Factors	10 Hours		D&D					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	15.00	Hours
Factors	15 Hours							
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	20.00	Hours
Factors	20 Hours		R.Roberts					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	20.00	Hours
Factors	20 Hours		W. Chromec					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	10 Hours		B. Fiehwea					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	8,119.30	Dollars
Factors	120 Hours		80 \$/hr SeniorTech. Support					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	1,353.22	Dollars
Factors	20 Hours		80 \$/Hr senior technical support					
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	K265S	ER Programs	Linear	355.22	Dollars
Factors	10 Hours		42 \$/HR S. Luker					
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	3,044.74	Dollars
Factors	120 Hours		30 \$/hr					
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K253S	Remediation, Industrial & Site Serv	Linear	1,184.06	Dollars
Factors	20 Hours		70 \$/hr GIS					
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	355.22	Dollars
Factors	10 Hours		42 \$/hr					
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	1,065.66	Dollars
Factors	30 Hours		42 \$/Hr					
						0.84576 [SYS 061400] .84576000 - Svstem		

Line Item 114 - Revise Draft Proposed Plan

BOE	Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site cvaracterization and dispositioning. Experience Item Desc - Incorporate response resolution and revise draft Proposed Plan. Breakdown of Cost Data: Item - Labor, subcontract dollars, and supplies to support incorporating response resolution and to revise the draft Proposed Plan.
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WBS No: 1GAB0C02
Activity ID: 1GFR000110

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Units - lot
Unit Cost -Site hours: 485 Subcontract dollars:\$43,540 Document Production Supplies: \$1000
Unit Cost Adjustment factor -none
Revised Unit Cost - none
Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80 Hours		N. Demos					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	60.00	Hours
Factors	60 Hours		D&D					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	80.00	Hours
Factors	80 Hours		D&D					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	25.00	Hours
Factors	25 Hours							
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80 Hours		R. Roberts					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80 Hours		W. Chromec					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80 Hours		B. Fiehwea					
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	1,000.00	Dollars
Factors	1000 Dollars							
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	5,412.86	Dollars
Factors	80 Hours		80 \$/Hr senior technical support					
						0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	9,472.51	Dollars
Factors	140 Hours		80 \$/Hr senior technical support					
						0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	4,059.65	Dollars
Factors	80 Hours		60 \$/Hr technical support					
						0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	K265S	ER Programs	Linear	1,420.88	Dollars
Factors	40 Hour		42 \$/Hr S. Luker					
						0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	3,552.19	Dollars
Factors	140 Hours		30 \$/Hr					
						0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K109S	Env Sys. Stewardship & Compliance	Linear	5,920.32	Dollars
Factors	100 Hours		70 \$/hr GIS					
						0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K253S	Remediation, Industrial & Site Serv	Linear	1,184.06	Dollars
Factors	20 hours		70 \$/hr W.Cheeks					
						0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K265S	ER Programs	Linear	4,736.26	Dollars
Factors	80 Hours		70 \$/Hr Data Analysis					
						0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	1,065.66	Dollars
Factors	30 Hours		42 \$/hr P&I					
						0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	1,243.27	Dollars
Factors	35 Hours		42 \$/Hr					
						0.84576 [SYS 061400]	.84576000	- System

WBS No: 1GAB0C02
Activity ID: 1GFR000110

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill	Department	Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	20.168.19 Dollars
Factors		20168.2 Dollars					
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	8.899.16 Dollars
Factors		8899.16 Dollars					

Activity ID: 1GFR000170 Description: Prepare Summary & Dft Fnl PP Responsiveness Summ

Cost Risk 3 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
120	Agency review/resolution mtas	1.00	each		260	260	8.961	26.769	0	35.730	3.114	38.844
130	Public mtas and comments	1.00	each		430	430	14.815	52.777	0	67.592	5.148	72.741
171	Prep. Dft Fnl PP Responsivenes Sum.	1.00	each		520	520	17.866	58.755	0	76.621	6.209	82.830
172	Response to DOE Comments	1.00	each		95	95	3.313	15.477	0	18.791	1.151	19.942
173	Produce Dft Fnl PP Responsivenes Sum	1.00	each		50	50	1.858	5.271	0	7.129	646	7.774
SYS	Contingency And Escalation	1.00	lea	EE	0	0	0	0	52.119	52.119	0	52.119
Total for Activity 1GFR000170:						1.355	46.812	159.050	52.119	257.981	16.268	274.250

Line Item 120 - Agency review/resolution mtgs

BOE

Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site cvaracterization and dispositioning.

Experience Item Desc - Respond to agency comments and meet with agency personnel to resolve comment on the draft Proposed Plan.

Breakdown of Cost Data:

Item - Labor, subcontract dollars, and travel to support responding to and resolving agency comments on the draft Proposed Plan.

Units - lot

Unit Cost -Site hours: 260 Subcontract dollars:\$31060 Travel to Meetings: \$500

Unit Cost Adjustment factor -none

Revised Unit Cost - none

Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element			Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE		E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours	N. Demos						
750	STRAIGHT TIME BASE		E130	OTHER ENGINEERS	K311S	D&D Program	Linear	40.00	Hours
Factors	40	Hours	D&D						
750	STRAIGHT TIME BASE		E130	OTHER ENGINEERS	K311S	D&D Program	Linear	40.00	Hours
Factors	40	Hours	D&D						
750	STRAIGHT TIME BASE		M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	20.00	Hours
Factors	20	Hours							
750	STRAIGHT TIME BASE		P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours	R. Roberts						
750	STRAIGHT TIME BASE		S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours	W. Chromec						
750	STRAIGHT TIME BASE		S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours	B. Fiehwea						
A5H	SUBCONTRACTED SRVS		0000	NONE	K265S	ER Programs	Linear	2.029.82	Dollars
Factors	40	Hours	60	\$/Hr facilitator					
							0.84576 ISYS 0614001.84576000 - Svstem		
A5H	SUBCONTRACTED SRVS		0000	NONE	K265S	ER Programs	Linear	10.825.73	Dollars
Factors	160	Hours	80	\$/Hr senior technical support					
							0.84576 ISYS 0614001.84576000 - Svstem		
A5H	SUBCONTRACTED SRVS		0000	NONE	K265S	ER Programs	Linear	2.029.82	Dollars
Factors	40	Hours	60	\$/Hr technical support					
							0.84576 ISYS 0614001.84576000 - Svstem		

WBS No: 1GAB0C02
Activity ID: 1GFR000170

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

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*

Starts In FY *

A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2,706.43	Dollars
Factors	40	Hours	80	\$/Hr senior technical support				
0.84576 [SYS 061400] .84576000 - Svstem								
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	4,059.65	Dollars
Factors	160	Hours	30	\$/Hr				
0.84576 [SYS 061400] .84576000 - Svstem								
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K253S	Remediation, Industrial & Site Serv	Linear	1,776.10	Dollars
Factors	30	Hours	70	\$/Hr GIS				
0.84576 [SYS 061400] .84576000 - Svstem								
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	1,420.88	Dollars
Factors	40	Hours	42	\$/hr P&I				
0.84576 [SYS 061400] .84576000 - Svstem								
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	1,420.88	Dollars
Factors	40	Hours	42	\$/hr				
0.84576 [SYS 061400] .84576000 - Svstem								
A5M	TRAVEL/TRAIN/RELOCAT	0000	NONE	K265S	ER Programs	Linear	500.00	Dollars
Factors	500	Dollars	Travel to Meetings					

Line Item 130 - Public mtgs and comments

BOE

Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site characterization and dispositioning.

Experience Item Desc - Attend public meetings on the Proposed Plan in the surrounding communities and Respond to comments on the draft Proposed Plan.

Breakdown of Cost Data:

Item - Labor and travel to support responding to agency comments on the draft Proposed Plan.

Units - lot

Unit Cost -Site hours: 430 Subcontract dollars:\$61220 Travel to Meetings: \$1000

Unit Cost Adjustment factor -none

Revised Unit Cost - none

Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	Hours	N. Demos					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	80.00	Hours
Factors	80	Hours	D&D					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	30.00	Hours
Factors	30	Hours						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	Hours	R. Roberts					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	Hours	w. Chromec					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	Hours	B. Fiehwea					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	18,945.02	Dollars
Factors	280	Hours	80	\$/hr				
0.84576 [SYS 061400] .84576000 - Svstem								
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	4,059.65	Dollars
Factors	80	Hours	60	\$/Hr technical support				
0.84576 [SYS 061400] .84576000 - Svstem								
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	5,412.86	Dollars
Factors	80	Hours	80	\$/Hr senior technical support				
0.84576 [SYS 061400] .84576000 - Svstem								
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	4,059.65	Dollars
Factors	80	Hours	60	\$/Hr facilitator				

0.84576 [SYS 061400] .84576000 - Svstem

WBS No: 1GAB0C02
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A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	7.104.38	Dollars
Factors	280	Hours	30	\$/Hr				
						0.84576	ISYS 0614001	.84576000 - Svstem
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K109S	Env Svs. Stewardship & Compliance	Linear	3.552.19	Dollars
Factors	60	Hours	70	\$/Hr GIS				
						0.84576	ISYS 0614001	.84576000 - Svstem
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K253S	Remediation, Industrial & Site Serv	Linear	1.184.06	Dollars
Factors	20	Dollars	70	\$/ W. Cheeks				
						0.84576	ISYS 0614001	.84576000 - Svstem
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K265S	ER Programs	Linear	3.552.19	Dollars
Factors	60	Hours	70	\$/Hr Data Analysis				
						0.84576	ISYS 0614001	.84576000 - Svstem
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	1.065.66	Dollars
Factors	30	Hours	42	\$/hr P&I				
						0.84576	ISYS 0614001	.84576000 - Svstem
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	2.841.75	Dollars
Factors	80	Hours	42	\$/hr				
						0.84576	ISYS 0614001	.84576000 - Svstem
A5M	TRAVEL/TRAIN/RELOCAT	0000	NONE	K265S	ER Programs	Linear	1.000.00	Dollars
Factors	1000	Dollars						

Line Item 171 - Prep. Drft Fnl PP Responsivenes Sum.

BOE

Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site characterization and dispositioning.

Experience Item Desc - Respond to agency and stakeholder comments on the draft Proposed Plan and prepare Responsiveness Summary.

Breakdown of Cost Data:

Item - Labor to support responding comments on the draft Proposed Plan and preparing Responsiveness Summary.

Units - lot

Unit Cost -Site hours: 520 Subcontract dollars:\$69470

Unit Cost Adjustment factor -none

Revised Unit Cost - none

Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	100.00	Hours
Factors	100	Hours	N. Demos					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	100.00	Hours
Factors	100	Hours	D&D					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	40.00	Hours
Factors	40	Hours						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	100.00	Hours
Factors	100	Hours	R Roberts					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	100.00	Hours
Factors	100	Hours	W. Chromec					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	80.00	Hours
Factors	80	Hours	B. Fiehwea					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	5.074.56	Dollars
Factors	100	Hours	60	\$/Hr technical support				
						0.84576	ISYS 0614001	.84576000 - Svstem
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	5.412.86	Dollars
Factors	80	Hours	80	\$/Hr senior technical support				
						0.84576	ISYS 0614001	.84576000 - Svstem
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	23.004.67	Dollars
Factors	340	Hours	80	\$/Hr senior technical support				

0.84576 ISYS 0614001 .84576000 - Svstem

WBS No: 1GAB0C02
Activity ID: 1GFR000170

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
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Activity Filter *

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A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	K265S	ER Programs	Linear	1,420.88	Dollars
Factors	40 Hours		42 \$/Hr S Luker					
						0.84576	[SYS 061400]	.84576000 - Svstem
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	8,626.75	Dollars
Factors	340 Hours		30 \$/Hr					
						0.84576	[SYS 061400]	.84576000 - Svstem
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K253S	Remediation, Industrial & Site Serv	Linear	1,480.08	Dollars
Factors	25 Hours		70 \$/hr					
						0.84576	[SYS 061400]	.84576000 - Svstem
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K253S	Remediation, Industrial & Site Serv	Linear	5,920.32	Dollars
Factors	100 Hours		70 \$/hr GIS					
						0.84576	[SYS 061400]	.84576000 - Svstem
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K265S	ER Programs	Linear	3,552.19	Dollars
Factors	60 Hours		70 \$/hr Data Anal.					
						0.84576	[SYS 061400]	.84576000 - Svstem
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	1,420.88	Dollars
Factors	40 Hours		42 \$/hr					
						0.84576	[SYS 061400]	.84576000 - Svstem
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	2,841.75	Dollars
Factors	80 Hours		42 \$/Hr					
						0.84576	[SYS 061400]	.84576000 - Svstem

Line Item 172 - Response to DOE Comments

BOE

Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site characterization and dispositioning.

Experience Item Desc - Respond to DOE comments on the draft Proposed Plan and Responsiveness Summary.

Breakdown of Cost Data:

Item - Labor to support responding to DOE comments on the draft Proposed Plan and Responsiveness Summary.

Units - lot

Unit Cost -Site hours: 95 Subcontract dollars:\$18300

Unit Cost Adjustment factor -none

Revised Unit Cost - none

Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

	Cost Element		Skill		Department	Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	10 Hours		N. Demos					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	10.00	Hours
Factors	10 Hours		D&D					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	10.00	Hours
Factors	10 Hours		D&D					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	15.00	Hours
Factors	15 Hours							
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	20.00	Hours
Factors	20 Hours		R.Roberts					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	20.00	Hours
Factors	20 Hours		W. Chromec					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	10.00	Hours
Factors	10 Hours		B. Fiehwea					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	8,119.30	Dollars
Factors	120 Hours		80 \$/hr SeniorTech. Support					
						0.84576	[SYS 061400]	.84576000 - Svstem
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	1,353.22	Dollars
Factors	20 Hours		80 \$/Hr senior technical support					

0.84576 [SYS 061400] .84576000 - Svstem

WBS No: 1GAB0C02
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Baseline Cost and Basis of Estimate

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A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	K265S	ER Programs	Linear	355.22	Dollars
Factors	10	Hours	42	\$/HR S. Luker				
						0.84576	[SYS 061400]	.84576000 - Svsstem
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	3.044.74	Dollars
Factors	120	Hours	30	\$/hr				
						0.84576	[SYS 061400]	.84576000 - Svsstem
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K253S	Remediation, Industrial & Site Serv	Linear	1.184.06	Dollars
Factors	20	Hours	70	\$/hr GIS				
						0.84576	[SYS 061400]	.84576000 - Svsstem
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	355.22	Dollars
Factors	10	Hours	42	\$/hr				
						0.84576	[SYS 061400]	.84576000 - Svsstem
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	1.065.66	Dollars
Factors	30	Hours	42	\$/Hr				
						0.84576	[SYS 061400]	.84576000 - Svsstem

Line Item 173 - Produce Dft Fnl PP Responsivenes Sum

BOE	Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site characterization and dispositioning.							
	Experience Item Desc - Produce the Draft Final Proposed Plan and Responsiveness Summary.							
	Breakdown of Cost Data:							
	Item - Labor and supplies to support incorporating DOE comments and producing the Frafft Final Proposed Plan and Responsiveness Summary.							
	Units - lot							
	Unit Cost -Site hours: 50 Subcontract dollars:\$5050 Document Production Supplies: \$1000							
	Unit Cost Adjustment factor -none							
	Revised Unit Cost - none							
	Basis for adjustment - none							
	This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.							

Resources	Cost Element		Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	20.00	Hours
Factors	20	Hours							
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried		Linear	30.00	Hours
Factors	30	Hours	W. Chromec						
A5C	SUPPLIES	0000	NONE	K265S	ER Programs		Linear	1,000.00	Dollars
Factors	1000	Dollars	Document Production Supplies						
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs		Linear	1,014.91	Dollars
Factors	40	Hours	30	\$/Hr					
							0.84576	[SYS 061400]	.84576000 - System
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K109S	Env Sys. Stewardship & Compliance		Linear	2,368.13	Dollars
Factors	40	Hours	70	\$/hr					
							0.84576	[SYS 061400]	.84576000 - System
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs		Linear	888.05	Dollars
Factors	25	Hours	42	\$/Hr					
							0.84576	[SYS 061400]	.84576000 - Svsstem

Line Item SYS - Contingency And Escalation

BOE										
Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	CON	CONTINGENCY		0000	NONE	ZDEPT	No Department	Linear	36.532.93	Dollars
	Factors 36532.9 Dollars									
	ESC	ESCALATION		0000	NONE	ZDEPT	No Department	Linear	15.586.03	Dollars
	Factors 15586.0 Dollars									

Activity ID: 1GFR000210 Description: Develop Preliminary Dft Interim CAD/ROD

Cost Risk 3 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
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WBS No: 1GAB0C02
Activity ID: 1GFR000210

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

191	Drft Final PP agency Rev. mtgs.	1.00	each		160	160	5.509	14.261	0	19.770	1.906	21.676
201	Incorp. Comments and finalize Int. CAD/ROD PP	1.00	each		360	360	11.982	22.937	0	34.919	4.146	39.065
211	Develop Prelim. Drft Int. CAD/ROD	1.00	each		540	540	18.611	34.153	0	52.764	6.439	59.203
221	Internal Rev	1.00	each		110	110	3.796	10.217	0	14.013	1.313	15.326
231	Final Revision and production	1.00	each		240	240	8.300	14.700	0	23.000	2.872	25.872
241	Agency review mtgs	1.00	each		215	215	7.407	16.333	0	23.740	2.563	26.303
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	53.041	53.041	0	53.041
Total for Activity 1GFR000210:						1.625	55.606	112.600	53.041	221.247	19.240	240.487

Line Item 191 - Drft Final PP agency Rev. mtgs.

BOE

Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site characterization and dispositioning.

Experience Item Desc - Meetings with agencies to review Draft Final Proposed Plan and Responsiveness Summary explain any changes and comme to final agreement on Interim CAD/ROD - 3 meetings and support.

Breakdown of Cost Data:

Item - Labor and travel to support responding to DOE comments on the draft Proposed Plan and Responsiveness Summary.

Units - lot

Unit Cost -Site hours: 160 Subcontract dollars:\$16270 Travel for meetings: \$500

Unit Cost Adjustment factor -none

Revised Unit Cost - none

Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	30.00	Hours
Factors	30	Hours	N. Demos					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	30.00	Hours
Factors	30	Hours	D&D					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	10.00	Hours
Factors	10	Hours						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	30.00	Hours
Factors	30	Hours	R. Roberts					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	30.00	Hours
Factors	30	Hours	W. Chromec					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	30.00	Hours
Factors	30	Hours	B. Fiehwea					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	1.522.37	Dollars
Factors	30	Hours	60 \$/Hr facilitator					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	5.412.86	Dollars
Factors	80	Hours	80 \$/Hr senior technical support					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	1.522.37	Dollars
Factors	30	Hours	60 \$/Hr technical support					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2.029.82	Dollars
Factors	30	Hours	80 \$/Hr senior technical support					
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	2.029.82	Dollars
Factors	80	Hours	30 \$/hr					
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	532.83	Dollars
Factors	15	Hours	42 \$/hr P&I					
0.84576 [SYS 061400] .84576000 - Svstem								

WBS No: 1GAB0C02
Activity ID: 1GFR000210

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project Baseline Devl
WBS Filter 1GAB
Activity Filter *

Starts In FY *

A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	710.44	Dollars
Factors	20	Hours	42	\$/hr				

0.84576 [SYS 061400] .84576000 - System

A5M	TRAVEL/TRAIN/RELOCAT	0000	NONE	K265S	ER Programs	Linear	500.00	Dollars
Factors	500	Dollars	Travel to Meetings					

Line Item 201 - Incorp. Comments and finalize Int. CAD/ROD PP

BOE

Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site dispositioning.

Experience Item Desc - Incorporate comments from agencies and finalize Interim CAD/ROD Proposed Plan and Responsiveness Summary.

Breakdown of Cost Data:

Item - Labor to incorporate comments from agencies and finalize Interim CAD/ROD Proposed Plan and Responsiveness Summary.

Units - lot

Unit Cost -Site hours: 360 Subcontract dollars:\$27120

Unit Cost Adjustment factor -none

Revised Unit Cost - none

Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	60.00	Hours

Factors 60 Hours N. Demos

750	STRAIGHT TIME BASE	E130 OTHER ENGINEERS	K311S D&D Program	Linear	60.00	Hours
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Factors 60 Hours D&D

750	STRAIGHT TIME BASE	M040 MANAGERS (GRADE 64 - 68)	K265S ER Programs	Linear	20.00	Hours
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Factors 20 Hours

750	STRAIGHT TIME BASE	P070 COST ESTIMATORS PLANNERS AN	K265S ER Programs	Linear	60.00	Hours
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Factors 60 Hours P&I

750	STRAIGHT TIME BASE	P080 HEALTH PHYSICISTS	R100S RMRS Salaried	Linear	60.00	Hours
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Factors 60 Hours R. Roberts

750	STRAIGHT TIME BASE	S090 OTHER SCIENTISTS	R100S RMRS Salaried	Linear	60.00	Hours
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Factors 60 Hours W. Chromec

750	STRAIGHT TIME BASE	S090 OTHER SCIENTISTS	R100S RMRS Salaried	Linear	40.00	Hours
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Factors 40 Hours B. Fiehweq

A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	8,119.30	Dollars
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Factors 120 Hours 80 \$/Hr senior technical support

0.84576 [SYS 061400] .84576000 - System

A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2,029.82	Dollars
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Factors 40 Hours 60 \$/Hr technical support

0.84576 [SYS 061400] .84576000 - System

A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	4,059.65	Dollars
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Factors 60 Hours 80 \$/Hr S. Serrez

0.84576 [SYS 061400] .84576000 - System

A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	K265S	ER Programs	Linear	710.44	Dollars
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Factors 20 Hour 42 \$/Hr S. Luker

0.84576 [SYS 061400] .84576000 - System

A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	3,044.74	Dollars
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Factors 120 Hours 30 \$/Hr

0.84576 [SYS 061400] .84576000 - System

A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K109S	Env Sys. Stewardship & Compliance	Linear	2,368.13	Dollars
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Factors 40 Hours 70 \$/hr GIS

0.84576 [SYS 061400] .84576000 - System

A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K265S	ER Programs	Linear	1,184.06	Dollars
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Factors 20 Hours 70 \$/Hr Data Anal.

0.84576 [SYS 061400] .84576000 - System

WBS No: 1GAB0C02
Activity ID: 1GFR000210

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

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A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	1,420.88	Dollars
Factors	40	Hours	42	\$/Hr				

0.84576 [SYS 061400] .84576000 - Svstem

Line Item 211 - Develop Prelim. Drft Int. CAD/ROD

BOE

Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site characterization and dispositioning.

Experience Item Desc - Develop the Preliminary Draft Interim CAD/ROD .

Breakdown of Cost Data:

Item - Labor and supplies to Develop the Preliminary Draft Interim CAD/ROD.

Units - lot

Unit Cost -Site hours: 540 Subcontract dollars:\$39790 Document Production Supplies: \$500

Unit Cost Adjustment factor -none

Revised Unit Cost - none

Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	100.00	Hours
Factors	100	Hours	N. Demos					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	100.00	Hours
Factors	100	Hours	D&D					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	40.00	Hours
Factors	40	Hours						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	100.00	Hours
Factors	100	Hours	R. Roberts					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	100.00	Hours
Factors	100	Hours	W. Chromec					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	100.00	Hours
Factors	100	Hours	B. Fiehwea					
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	500.00	Dollars
Factors	500	Dollars	Document Production Supplies					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	8,119.30	Dollars
Factors	120	Hours	80	\$/Hr senior technical support				
0.84576 [SYS 061400] .84576000 - Svstem								
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	4,059.65	Dollars
Factors	80	Hours	60	\$/Hr technical support				
0.84576 [SYS 061400] .84576000 - Svstem								
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	6,766.08	Dollars
Factors	100	Hours	80	\$/Hr S. Serrez				
0.84576 [SYS 061400] .84576000 - Svstem								
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	K265S	ER Programs	Linear	888.05	Dollars
Factors	25	Hours	42	\$/Hr S. Luker				
0.84576 [SYS 061400] .84576000 - Svstem								
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	3,044.74	Dollars
Factors	120	Hours	30	\$/Hr				
0.84576 [SYS 061400] .84576000 - Svstem								
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K109S	Env. Sys., Stewardship & Compliance	Linear	4,736.26	Dollars
Factors	80	Hours	70	\$/hr GIS				
0.84576 [SYS 061400] .84576000 - Svstem								
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K253S	Remediation, Industrial & Site Serv	Linear	1,184.06	Dollars
Factors	20	Hours	70	\$/hr				
0.84576 [SYS 061400] .84576000 - Svstem								
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K265S	ER Programs	Linear	2,368.13	Dollars
Factors	40	Hours	70	\$/Hr Data Anal.				

0.84576 [SYS 061400] .84576000 - Svstem

WBS No: 1GAB0C02
Activity ID: 1GFR000210

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

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A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	1.420.88	Dollars
Factors	40	Hours	42	\$/hr P&I				
						0.84576 [SYS 061400]	.84576000	- Svstem
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	1.065.66	Dollars
Factors	30	Hours	42	\$/Hr				
						0.84576 [SYS 061400]	.84576000	- Svstem

Line Item 221 - Internal Rev

BOE	Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site dispositioning.
	Experience Item Desc - Internal Review of the Preliminary Draft interim CAD/ROD.
	Breakdown of Cost Data:
	Item - Labor to support internal review of thew Prelim. Draft Interim CAD/ROD.
	Units - lot
	Unit Cost -Site hours: 110 Subcontract dollars:\$12080
	Unit Cost Adjustment factor -none
	Revised Unit Cost - none
	Basis for adjustment - none
	This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources	Cost Element			Skill		Department		Curve	Quantity	Units
	750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	20.00	Hours	
Factors	20	Hours	N. Demos							
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	20.00	Hours		
Factors	20	Hours	D&D							
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	10.00	Hours		
Factors	10	Hours								
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	20.00	Hours		
Factors	20	Hours	R. Roberts							
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	20.00	Hours		
Factors	20	Hours	W. Chromec							
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	20.00	Hours		
Factors	20	Hours	B. Fiehwea							
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	5,412.86	Dollars		
Factors	80	Hours	80	\$/Hr senior technical support						
							0.84576 [SYS 061400]	.84576000 - System		
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	1,353.22	Dollars		
Factors	20	Hours	80	\$/Hr S. Serrez						
							0.84576 [SYS 061400]	.84576000 - System		
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	K265S	ER Programs	Linear	710.44	Dollars		
Factors	20	Hours	42	\$/Hr S Luker						
							0.84576 [SYS 061400]	.84576000 - System		
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	2,029.82	Dollars		
Factors	80	Hours	30	\$/hr						
							0.84576 [SYS 061400]	.84576000 - System		
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	710.44	Dollars		
Factors	20	Hours	42	\$/Hr						
							0.84576 [SYS 061400]	.84576000 - Svstem		

Line Item 231 - Final Revision and production

BOE	Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site characterizing and dispositioning.
	Experience Item Desc - Final revision and production of the Preliminary Draft Interim CAD/ROD .
	Breakdown of Cost Data:
	Item - Labor and supplies for final revision and production of the Preliminary Draft Interim CAD/ROD.
	Units - lot
	Unit Cost -Site hours: 240 Subcontract dollars:\$16790 Document Production Supplies: \$500
	Unit Cost Adjustment factor -none

WBS No: 1GAB0C02
Activity ID: 1GFR000210

Rockv Flats Closure Project
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Revised Unit Cost - none
Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 Hours		N. Demos					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	25.00	Hours
Factors	25 Hours		D&D					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	15.00	Hours
Factors	15 Hours							
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	60.00	Hours
Factors	60 Hours		R. Roberts					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	60.00	Hours
Factors	60 Hours		W Chromec					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 Hours		B. Fiehwea					
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	500.00	Dollars
Factors	500 Dollars		Document Production Supplies					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2,706.43	Dollars
Factors	40 Hours	80	\$/Hr S. Serrez					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	6,766.08	Dollars
Factors	100 Hours	80	\$/Hr senior technical support					
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	K265S	ER Programs	Linear	710.44	Dollars
Factors	20 Hours	42	\$/Hr S. Luker					
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	761.18	Dollars
Factors	30 Hours	30	\$/Hr					
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K109S	Env Sys. Stewardship & Compliance	Linear	2,368.13	Dollars
Factors	40 Hours	70	\$/hr GIS					
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	888.05	Dollars
Factors	25 Hours	42	\$/Hr					
0.84576 [SYS 061400] .84576000 - Svstem								

Line Item 241 - Agency review mtgs

BOE

Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site dispositioning.

Experience Item Desc - Meetings with agencies to receive, discuss and respond to comments on the Preliminary Draft Interim CAD/ROD .
Breakdown of Cost Data:
Item - Labor and travel for meetings with agencies to receive, discuss, and respond to commentson the Preliminary Draft Interim CAD/ROD.
Units - lot
Unit Cost -Site hours: 215 Subcontract dollars:\$17,880 Travel for meetings: \$500
Unit Cost Adjustment factor -none
Revised Unit Cost - none
Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40 Hours		N. Demos					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	40.00	Hours
Factors	40 Hours		D&D					

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750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	15.00	Hours
Factors	15	Hours						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours	R. Roberts					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours	W. Chromec					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours	B. Fiehwea					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2,029.82	Dollars
Factors	40	Hours	60 \$/Hr facilitator					
						0.84576 [SYS 061400]	84576000	- Svstem
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	5,412.86	Dollars
Factors	80	Hours	80 \$/Hr senior technical support					
						0.84576 [SYS 061400]	84576000	- Svstem
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	1,522.37	Dollars
Factors	30	Hours	60 \$/Hr technical support					
						0.84576 [SYS 061400]	84576000	- Svstem
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2,706.43	Dollars
Factors	40	Hours	80 \$/Hr S. Serrez					
						0.84576 [SYS 061400]	84576000	- Svstem
A5H	SUBCONTRACTED SRVS	E110	QUALITY CONTROL ENGINEERS	K265S	ER Programs	Linear	710.44	Dollars
Factors	20	Hours	42 \$/hr S. Luker					
						0.84576 [SYS 061400]	84576000	- Svstem
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	2,029.82	Dollars
Factors	80	Hours	30 \$/hr					
						0.84576 [SYS 061400]	84576000	- Svstem
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	710.44	Dollars
Factors	20	Hours	42 \$/hr P&I					
						0.84576 [SYS 061400]	84576000	- Svstem
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	710.44	Dollars
Factors	20	Hours	42 \$/hr					
						0.84576 [SYS 061400]	84576000	- Svstem
A5M	TRAVEL/TRAIN/RELOCAT	0000	NONE	K265S	ER Programs	Linear	500.00	Dollars
Factors	500	Dollars	Travel to Meetings					

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	38.667.14	Dollars
Factors	38667.1	Dollars						
ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	14.374.30	Dollars
Factors	14374.3	Dollars						

Activity ID: 1GFR000250 Description: Develop and Revise CAD/ROD Comment Responses

Cost Risk 3 Schedule Risk 4

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
251	Develop CAD/ROD Comment Responses	1.00	each		380	380	13,016	29,322	0	42,338	4,503	46,841
261	Comment resolution mtas	1.00	each		220	220	7,592	16,349	0	23,941	2,627	26,568
271	Interim CAD/ROD Revision	1.00	each		280	280	9,589	15,740	0	25,329	3,318	28,647
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	28,879	28,879	0	28,879
Total for Activity 1GFR000250:						880	30,197	61,411	28,879	120,487	10,448	130,935

Line Item 251 - Develop CAD/ROD Comment Responses

BOE

Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site dispositioning.
Experience Item Desc - Develop and revise comment/responses for the Preliminary Draft Interim CAD/ROD .

WBS No: 1GAB0C02
Activity ID: 1GFR000250

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Baseline Cost and Basis of Estimate

Project Baseline Devl
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Starts In FY *

Breakdown of Cost Data:
Item - Labor and supplies to develop and revise comment/responses for the Preliminary Draft Interim CAD/ROD.
Units - lot
Unit Cost -Site hours: 380 Subcontract dollars:\$34670
Unit Cost Adjustment factor -none
Revised Unit Cost - none
Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element			Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried		Linear	80.00	Hours
Factors	80	Hours	N. Demos						
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program		Linear	60.00	Hours
Factors	60	Hours	D&D						
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs		Linear	20.00	Hours
Factors	20	Hours							
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried		Linear	80.00	Hours
Factors	80	Hours	R. Roberts						
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried		Linear	60.00	Hours
Factors	60	Hours	B. Fiehweq						
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried		Linear	80.00	Hours
Factors	80	Hours	W. Chromec						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs		Linear	10.825.73	Dollars
Factors	160	Hours	80 \$/Hr senior technical support						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs		Linear	2.029.82	Dollars
Factors	40	Hours	60 \$/Hr technical support						
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs		Linear	4.059.65	Dollars
Factors	60	Hours	80 \$/Hr S. Serrez						
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs		Linear	4.059.65	Dollars
Factors	160	Hours	30 \$/Hr						
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K109S	Env Sys. Stewardship & Compliance		Linear	2.960.16	Dollars
Factors	50	Hours	70 \$/hr GIS						
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K253S	Remediation. Industrial & Site Serv		Linear	888.05	Dollars
Factors	15	Hours	70 \$/hr W. Cheeks						
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K265S	ER Programs		Linear	2.368.13	Dollars
Factors	40	Hours	70 \$/Hr Data anal.						
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs		Linear	710.44	Dollars
Factors	20	Hours	42 \$/hr P&I						
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs		Linear	1.420.88	Dollars
Factors	40	Hours	42 \$/Hr						

0.84576 [SYS 061400] .84576000 - System

Line Item 261 - Comment resolution mtgs

BOE

Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site cvharacterizing and dispositioning.
Experience Item Desc - Organize and attend 4 comment resolution metings on agency comments on the Preliminary Draft Interim CAD/ROD.
Breakdown of Cost Data:
Item - Labor and sucontract dollars to organize and attend 4 comment resolution meetings on the agency comments on the Preliminary Draft Interim CAD/ROD.

WBS No: 1GAB0C02
Activity ID: 1GFR000250

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Units - lot
Unit Cost -Site hours: 220 Subcontract dollars:\$19330
Unit Cost Adjustment factor -none
Revised Unit Cost - none
Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours	N. Demos					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	40.00	Hours
Factors	40	Hours	D&D					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	20.00	Hours
Factors	20	Hours						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours	R. Roberts					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours	W. Chromec					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours	B. Fiehwea					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2,706.43	Dollars
Factors	40	Hours	80	\$/Hr S. Serrez		0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2,029.82	Dollars
Factors	40	Hours	60	\$/Hr facilitator		0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	6,766.08	Dollars
Factors	100	Hours	80	\$/Hr senior technical support		0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	2,537.28	Dollars
Factors	100	Hours	30	\$/hr		0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	P070	COST ESTIMATORS PLANNERS AN	K265S	ER Programs	Linear	1,420.88	Dollars
Factors	40	Hours	42	\$/hr P&I		0.84576 [SYS 061400]	.84576000	- System
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	888.05	Dollars
Factors	25	Hours	42	\$/hr		0.84576 [SYS 061400]	.84576000	- System

Line Item 271 - Interim CAD/ROD Revision

BOE

Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site characterizing and dispositioning.

Experience Item Desc - Revise the Preliminary Draft Interim CAD/ROD.

Breakdown of Cost Data:

Item - Labor and subcontract dollars to revise the Preliminary Draft Interim CAD/ROD.

Units - lot

Unit Cost -Site hours: 280 Subcontract dollars:\$18610

Unit Cost Adjustment factor -none

Revised Unit Cost - none

Basis for adjustment - none

This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element		Skill		Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	60.00	Hours
Factors	60	Hours	N. Demos					

WBS No: 1GAB0C02
Activity ID: 1GFR000250

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project
WBS Filter
Activity Filter
Baseline Devl
1GAB
*

Starts In FY *

750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	40.00	Hours
Factors	40	Hours	D&D					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	20.00	Hours
Factors	20	Hours						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	60.00	Hours
Factors	60	Hours	R. Roberts					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	60.00	Hours
Factors	60	Hours	W. Chromec					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	40.00	Hours
Factors	40	Hours	B. Fiehwea					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	6.766.08	Dollars
Factors	100	Hours	80 \$/Hr senior technical support					
						0.84576 [SYS 061400]	.84576000	- Svsstem
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2.706.43	Dollars
Factors	40	Hours	80 \$/Hr S. Serrez					
						0.84576 [SYS 061400]	.84576000	- Svsstem
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	2.537.28	Dollars
Factors	100	Hours	30 \$/Hr					
						0.84576 [SYS 061400]	.84576000	- Svsstem
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K109S	Env Svs. Stewardship & Compliance	Linear	2.664.14	Dollars
Factors	45	Hours	70 \$/hr GIS					
						0.84576 [SYS 061400]	.84576000	- Svsstem
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	1.065.66	Dollars
Factors	30	Hours	42 \$/Hr					
						0.84576 [SYS 061400]	.84576000	- System

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	21.052.68	Dollars
Factors	21052.7	Dollars			
ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	7.826.22	Dollars
Factors	7826.22	Dollars			

Activity ID: 1GFR000290 Description: Incorporate Interim CAD/ROD Fnl Agency Comments

Cost Risk 2 Schedule Risk 2

Line Item	Description	Quantity	Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
291	Incorporate final comments prod. final doc.	1.00	each		310	310	10.646	19.226	0	29.872	3.467	33.339
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	7.595	7.595	0	7.595
Total for Activity 1GFR000290:						310	10.646	19.226	7.595	37.467	3.467	40.934

Line Item 291 - Incorporate final comments prod. final doc.

BOE

Estimators Experience - Based on 12 years estimator's experience in scoping, budgeting, and CERCLA (Superfund) site characterizing and dispositioning.
Experience Item Desc - Organize and attend 4 comment resolution metings on agency comments on the Preliminary Draft Interim CAD/ROD.
Breakdown of Cost Data:
Item - Labor, sucontract dollars and supplies to organize and attend 4 comment resolution meetings on the agency comments on the Preliminary Draft Interim CAD/ROD.
Units - lot
Unit Cost -Site hours: 310 Subcontract dollars:\$21,550 Production Supplies: \$1000
Unit Cost Adjustment factor -none
Revised Unit Cost - none
Basis for adjustment - none
This estimate includes a project productivity/efficiency factor for committed but as yet undefined cost reductions.

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
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WBS No: 1GAB0C02
Activity ID: 1GFR000290

Rockv Flats Closure Project
Baseline Cost and Basis of Estimate

Project
WBS Filter
Activity Filter
Baseline Devl
1GAB
*

Starts In FY *

750	STRAIGHT TIME BASE	E050	ENVIRONMENTAL ENGINEERS	R100S	RMRS Salaried	Linear	60.00	Hours
Factors	60	Hours	N. Demos					
750	STRAIGHT TIME BASE	E130	OTHER ENGINEERS	K311S	D&D Program	Linear	60.00	Hours
Factors	60	Hours	D&D					
750	STRAIGHT TIME BASE	M040	MANAGERS (GRADE 64 - 68)	K265S	ER Programs	Linear	20.00	Hours
Factors	20	Hours						
750	STRAIGHT TIME BASE	P080	HEALTH PHYSICISTS	R100S	RMRS Salaried	Linear	60.00	Hours
Factors	60	Hours	R. Roberts					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	60.00	Hours
Factors	60	Hours	W. Chrome					
750	STRAIGHT TIME BASE	S090	OTHER SCIENTISTS	R100S	RMRS Salaried	Linear	50.00	Hours
Factors	50	Hours	B. Fiehwea					
A5C	SUPPLIES	0000	NONE	K265S	ER Programs	Linear	1,000.00	Dollars
Factors	1000	Dollars	Document Production Supplies					
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	6,766.08	Dollars
Factors	100	Hours	80 \$/Hr senior technical support					
						0.84576 [SYS 061400]	.84576000	- Svstem
A5H	SUBCONTRACTED SRVS	0000	NONE	K265S	ER Programs	Linear	2,706.43	Dollars
Factors	40	Hours	80 \$/Hr S. Serrez					
						0.84576 [SYS 061400]	.84576000	- Svstem
A5H	SUBCONTRACTED SRVS	G010	ADMINISTRATIVE ASSISTANTS	K265S	ER Programs	Linear	2,537.28	Dollars
Factors	100	Hours	30 \$/Hr					
						0.84576 [SYS 061400]	.84576000	- Svstem
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K265S	ER Programs	Linear	1,776.10	Dollars
Factors	30	Hours	70 \$/Hr Data Analysis					
						0.84576 [SYS 061400]	.84576000	- Svstem
A5H	SUBCONTRACTED SRVS	P060	COMPUTER SYSTEMS ANALYSTS	K267S	Analytical Laboratory Services	Linear	3,552.19	Dollars
Factors	60	Hours	70 \$/hr GIS					
						0.84576 [SYS 061400]	.84576000	- Svstem
A5H	SUBCONTRACTED SRVS	P160	TECHNICAL WRITERS AND EDITOR	K265S	ER Programs	Linear	888.05	Dollars
Factors	25	Hours	42 \$/Hr					
						0.84576 [SYS 061400]	.84576000	- Svstem

Line Item SYS - Contingency And Escalation

BOE

Resources

Cost Element	Skill	Department	Curve	Quantity	Units
CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	4,836.05	Dollars
Factors	4836.05	Dollars			
ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	2,758.81	Dollars
Factors	2758.81	Dollars			

Report Totals:

Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
346,886	10,248,371	40,214,736	15,340,826	65,803,934	3,369,621	69,173,555